HARVARD
MEDICAL LIBRARY

IN THE
Francis A. Countway
Library of Medicine
BOSTON

Digitized by the Internet Archive
in 2017 with funding from
The National Endowment for the Humanities and the Arcadia Fund

https://archive.org/details/medicalannalsofd3519medi

OPY 1

MEDICAL ANNALS of the DISTRICT OF COLUMBIA

HOWARD UNIVERSITY NUMBER

January, 1966 Vol. XXXV · No. 1

Studies in Sickle-cell Anemia
J. Kagwa, M.D., A. D. Ferguson, M.D., R. B. Scott, M.D., and W. H. Bullock, M.D.

Growth and Development of Negro Infants
E. F. Gerson, M.A., and R. B. Scott, M.D.

Carcinoma of the Gallbladder
S. A. Fuertes, M.D., R. N. Stella, M.D., J. E. White, M.D., J. D. Weaver, M.D., and R. K. Brown, M.D.

Incidence of Hemoglobin-S
A. L. Cherrie, M.S., and A. D. Ferguson, M.D.

Esophagoscopy
Emile C. Nash, M.D., and James W. Wills, M.D.

Falciparum Malaria
Althea D. Kessler, M.D.

Insulin-resistance
A. O. Hosten, M.D., C. P. Alexis, M.D., and W. L. Henry, Jr., M.D.

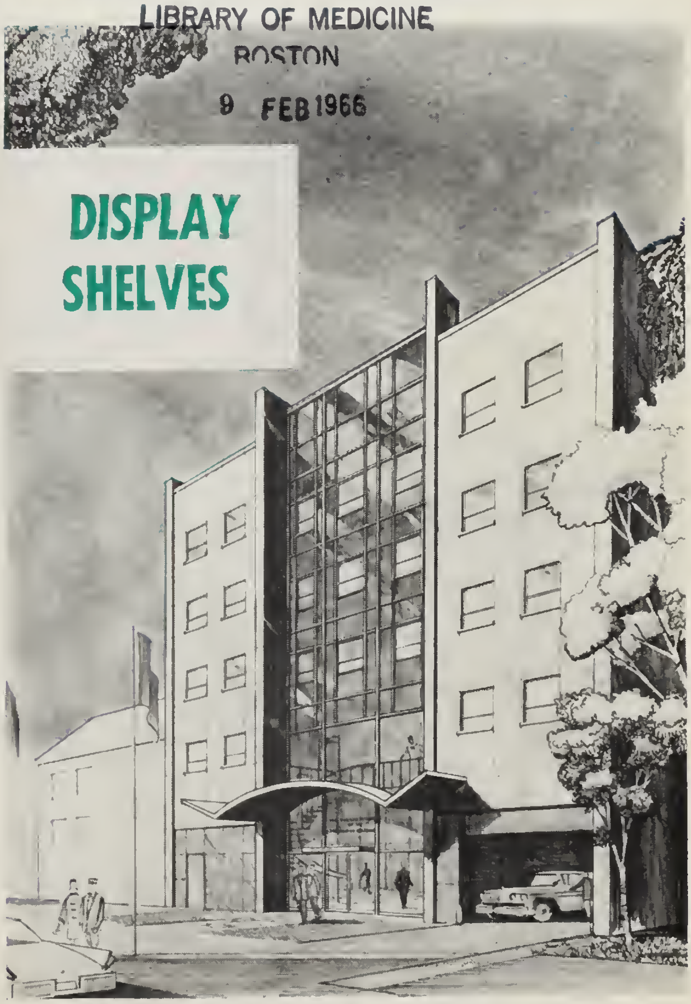
Virilizing Adrenal Tumors in Childhood
C. M. Russell, M.D., M. E. Jenkins, M.D., and D. M. French, M.D.

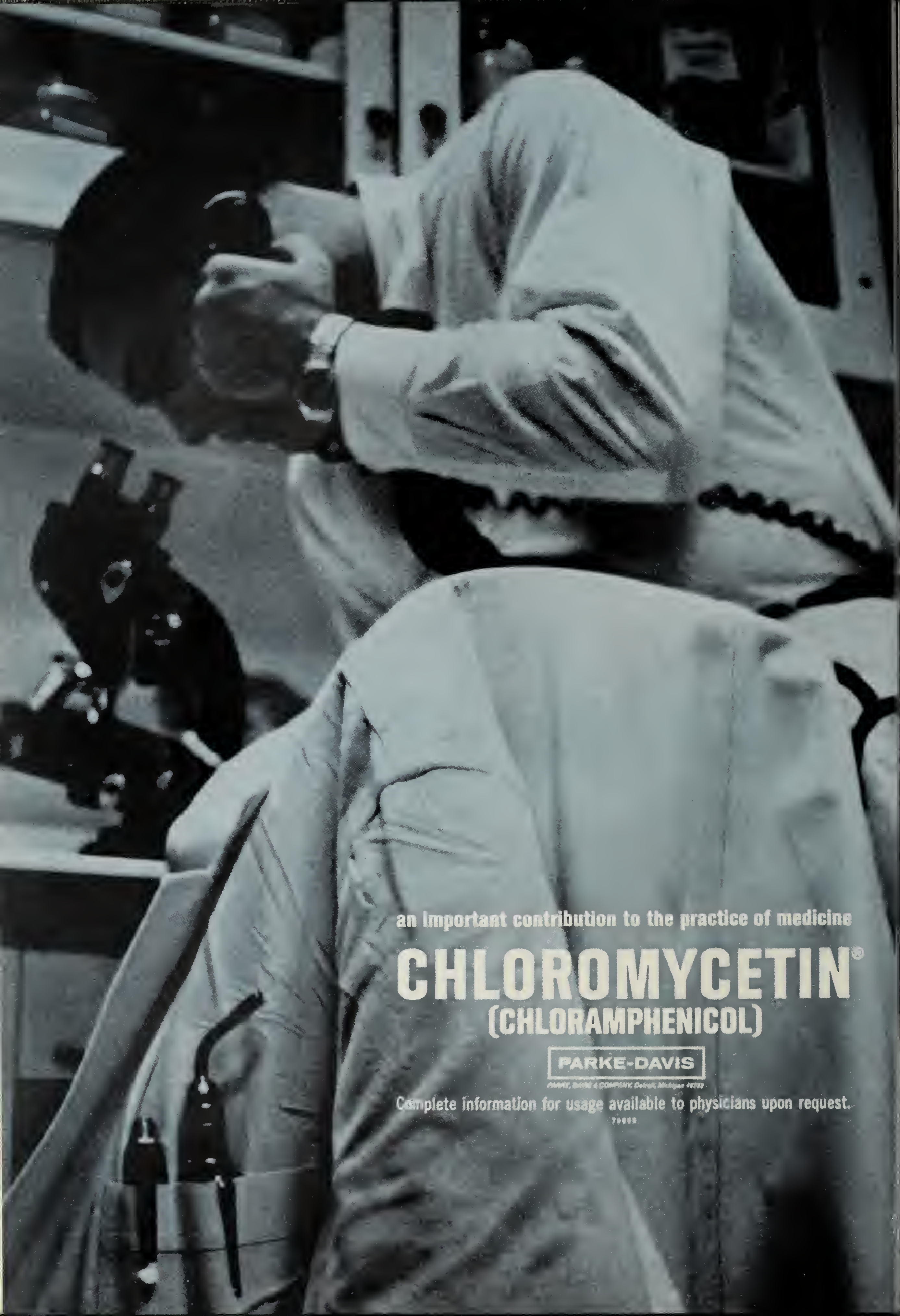
THE MEDICAL SOCIETY OF
THE DISTRICT OF COLUMBIA

2007 Eye Street Northwest

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
9 FEB 1966

DISPLAY
SHELVES





an important contribution to the practice of medicine

CHLOROMYCETIN®
(CHLORAMPHENICOL)

PARKE-DAVIS
PARKE, DAVIS & COMPANY, Detroit, Michigan 48232

Complete information for usage available to physicians upon request.
[illegible]

o help restore
nd stabilize the
itestinal flora
for fever blisters
and canker sores
of herpetic origin

LACTINEX®

TABLETS & GRANULES

LACTINEX—a viable culture containing both *Lactobacillus acidophilus* and *L. bulgaricus*—was first introduced to help restore the flora of the intestinal tract in infants and adults.[1, 2, 3, 4]

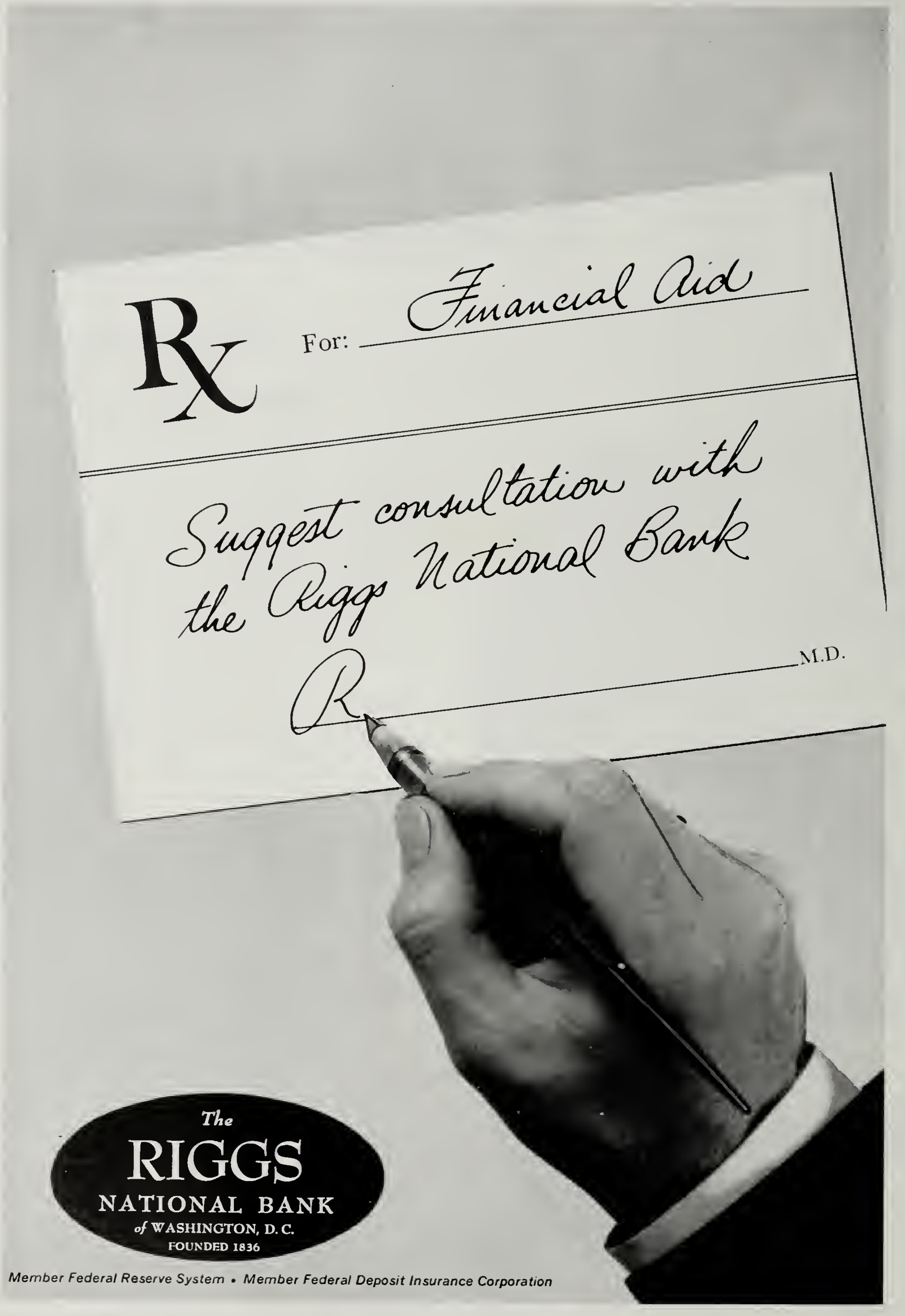
Further clinical work showed LACTINEX to be successful in the treatment of fever blisters and canker sores of herpetic origin.[4, 5, 6, 7]

No untoward side effects have been reported in 12 years of clinical use.

Literature on indications and dosage available on request.

(1) Frykman, H.M.: Minn. Med., Vol. 38, Jan. 1955. (2) Poth, E.J.: The J.A.M.A., Vol. 163, No. 15, April 13, 1957. (3) McGivney, J.: Texas State Jour. of Med., Vol. 51, No. 1, Jan. 1955. (4) Stern, F. H.: Jour. of The Amer. Ger. Soc., Vol. 11, No. 3, Mar. 1963. (5) Weekes, D. J.: N.Y. State Jour. of Med., Vol. 58, No. 16, Aug. 1958. (6) Abbott, P.L.: Jour. of Oral Surg., Anes. & Hosp. Dental Serv., Vol. 19, July 1961. (7) Weekes, D. J.: E.E.N.T. Digest, Vol. 25, No. 12, Dec. 1963.

HYNSON, WESTCOTT & DUNNING, INC.
(LXD2)
HW&D BALTIMORE, MARYLAND 21201


℞
For: Financial Aid
Suggest consultation with the Riggs National Bank
R
M.D.

The
RIGGS
NATIONAL BANK
of WASHINGTON, D.C.
FOUNDED 1836

Member Federal Reserve System • Member Federal Deposit Insurance Corporation

MEDICAL ANNALS

of the District of Columbia

EDITORIAL OFFICE:
2007 Eye Street, N.W., Washington, D.C. 20006
Telephone 223–2230

COPYRIGHT ©, 1966
BY THE MEDICAL SOCIETY
OF THE DISTRICT OF COLUMBIA

Yearly Subscription, $5.00
Single Number, 50¢

Second-class postage paid at Baltimore, Md.
Published monthly at
Mount Royal and Guilford Avenues,
Baltimore, Maryland 21202

Contents for January

HOWARD UNIVERSITY NUMBER

SCIENTIFIC ARTICLES

Studies in Sickle-cell Anemia. XXVIII. Clinical Observations on Prognosis and Outlook Beyond Childhood. *Juanita Kagwa, M.D.*, Kampala, Uganda, East Africa; *Angella D. Ferguson, M.D., Roland B. Scott, M.D., and William H. Bullock, M.D.*, Washington 1

Growth and Development of Negro Infants. VII. The Relationship of Parental Attitudes and Socioeconomic Pressures to Intelligence and Gross Motor Quotients During the Second Year of Life. *Elaine F. Gerson, M.A., and Roland B. Scott, M.D.*, Washington 5

Diagnosis of Primary Carcinoma of the Gallbladder Based on the Study of Thirty-three Cases. *Sylvia A. Fuertes, M.D.*, Washington; *Roque Nido Stella, M.D.*, San Juan, P.R.; *Jack E. White, M.D.*, Washington; *Joseph D. Weaver, M.D.*, Ahoskie, N.C.; *and R. Kelley Brown, M.D.*, Washington 9

The Incidence of Hemoglobin-S in the Human Blood Groups. *Anna L. Cherrie, M.S., and Angella D. Ferguson, M.D.*, Washington 13

Esophagoscopy: An Analysis of Two Hundred Cases. *Emile C. Nash, M.D., F.A.C.P.*, Washington, *and James W. Wills, M.D.*, Glenn Dale, Md. 15

Falciparum Malaria: Report of Two Cases in Children. *Althea D. Kessler, M.D.*, Washington 18

Insulin-resistance: Report of a Case and Review of the Subject. *Adrian O. Hosten, M.D., Carlton P. Alexis, M.D., and W. Lester Henry, Jr., M.D., F.A.C.P.*, Washington 21

Virilizing Adrenal Tumors in Childhood: Report of a Case. *Carol M. Russell, M.D., Melvin E. Jenkins, M.D., and David M. French, M.D.*, Washington 24

(Continued on page 6)

ONLY ONE FIRM CAN PROVIDE ALL THESE SERVICES, OR ANY ONE OF THEM...

- A complete low-cost patient billing service
- Confidential information on every account
- An ethical and effective collection service
- A dignified pre-collection service
- Professional accounts receivable consultation

THE CREDIT BUREAU, INC.

FOUR OFFICES TO SERVE YOU LOCALLY

WASHINGTON, D.C.; ROCKVILLE, MD.; FAIRFAX, VA.; ALEXANDRIA, VA.

3,000 CLOSELY ASSOCIATED AGENCIES THROUGHOUT THE COUNTRY

Call Now to Arrange an Appointment with Our Representative

ASSOCIATED CREDIT BUREAUS OF AMERICA, INC. MEDICAL CREDITS DIVISION

ED GARRETSON NAtional 8-0680

Contents for January

(*Continued*)

EDITORIALS

Robert James Coffey, M.D. 32
The Public School System and Its Health Services 33
Are You Ready, Doctor? 34
D. C. Political Action Committee 34

MISCELLANY

Genetic Counseling at Clinical Center 12
President's Page: The Doctor and His Medical Society 30
Health Dept. Notes: Birth Certificates—Accurate and Complete. *Murray Grant, M.D., D.P.H.*, Washington 35
1965 Community Health Week. *Lou Brott*, Washington 36
Annual Reports:
    Chairman of the Executive Board 39
    Board of Credentials 44
    Secretary-Treasurer 45
Guidelines for the Fee Review Committee (for Major Medical Coverage) 48
Proposed Budget 1966 49
Report on National Conference on Physicians and Schools. *Harold M. Hobart, M.D.*, Washington 50
Honorees at Society's Annual Assembly 50
News and Personals 55
Obituaries 60
Books Received *Adv. 8*
Medical Annals Staff and Officers of Medical Society *Adv. 21*
National and Regional Meetings *Adv. 31*
Book Reviews *Adv. 34*
Classified Advertisements *Adv. 48*
Index of Advertisers *Adv. 51*

INSURANCE FOR THE DOCTOR

***PROFESSIONAL LIABILITY**

OFFICE PUBLIC LIABILITY

LOW COST TERM LIFE INSURANCE

and

EMPLOYEES WORKMEN'S COMPENSATION
EQUIPMENT FLOATER
FIRE INSURANCE CONTENTS
BUSINESS EXPENSE DISABILITY
BONDS ON EMPLOYEES

AUTOMOBILE INSURANCE
ANNUITIES—FIXED & VARIABLE
NON-CAN DISABILITY INCOME
PENSION PLANS FOR DOCTORS
PENSION PLANS FOR EMPLOYEES

$1,000,000 CATASTROPHE LIABILITY

* endorsed by the Medical Society of the District of Columbia

Russell, Marsh & Kennedy, Inc.

WILLIAM G. RUSSELL
President

5151 Wisconsin Ave., N.W.
Telephone: 244-7600

The tell-tale lesion on the back of her neck

ARISTOCORT Topicals are particularly effective in controlling the inflammatory symptoms of many dermatoses including neurodermatitis, atopic dermatitis, eczematous dermatitis, seborrheic dermatitis and certain cases of psoriasis. The 0.1% Cream or Ointment is usually effective in abating symptoms of skin conditions responsive to topical triamcinolone, but the 0.5% Cream may be preferable in more resistant cases. *Dosage:* Apply small quantity to area 3 or 4 times daily. Side effects are rare. *Contraindications:* tuberculosis of the skin, herpes simplex, chickenpox, and vaccinia. Use with care on infected areas. Do not use in the eyes. Supplied in 5 and 15 Gm. tubes and ½ lb. jars. Also available in foam form and with Neomycin.

Aristocort® TOPICAL CREAM 0.1%
AND OINTMENT 0.1%
Triamcinolone Acetonide

LEDERLE LABORATORIES • A Division of American Cyanamid Company, Pearl River, New York

630-6

BOOKS RECEIVED

Acknowledgment is made of the following books which have recently been received.

Principles of Chest Roentgenology. A Programed Text. Benjamin Felson, M.D., Aaron S. Weinstein, M.D., and Harold B. Spitz, M.D. Price, $6.00. Pp. 221, illustrated. Philadelphia: Saunders, 1965.

Pediatric Electrocardiography. Normal and Abnormal Patterns, Incorporating the Vector Approach. Warren G. Guntheroth, M.D. Price, $7.00. Pp. 150, with illustrations by the author. Philadelphia: Saunders, 1965.

Neurological Surgery of Trauma. Colonel John Boyd Coates, Jr., MC, USA, Editor-in-Chief; Arnold M. Meirowsky, M.D., Editor, and 27 contributing authors. Prepared and published under the direction of Lt. General Leonard D. Heaton, The Surgeon General, United States Army. Price, $6.25. Pp. 604, with 273 illustrations and 35 tables. Washington, D.C.: Superintendent of Documents, U.S. Government Printing Office, 1965.

Drug Abuse. A Manual for Law Enforcement Officers. Prepared under the direction of James B. Landis, M.D., and Donald K. Fletcher. Pp. 55, illustrated. Philadelphia: Smith, Kline & French, 1965.

Bone Tumors, 3rd ed. Louis Lichtenstein, M.D. Price, $16.75. Pp. 411, with 251 illustrations. St. Louis: Mosby, 1965.

The Addict and the Law. Alfred R. Lindesmith, M.A., Ph.D. Price, $7.50. Pp. 337. Bloomington, Ind.: Indiana University Press, 1965.

Atlas of Cataract Surgery. John M. McLean, M.D., F.A.C.S. Illustrated by Shirley Baty. Price, $20.00. Pp. 130, with 80 figures. St. Louis: Mosby, 1965.

Management of the Patient with Cancer. Edited by Thomas F. Nealon, Jr., M.D. With Contributions by 71 Authorities. Price, $27.50. Pp. 1067, illustrated. Philadelphia: Saunders, 1965.

Diseases of the Newborn. Alexander J. Schaffer, M.D., with a Section on Neonatal Cardiology by Milton Markowitz, M.D., and a Section on Fluid and Electrolyte Therapy by Lawrence Finberg, M.D. Price, $22.00. Pp. 1023, illustrated. Philadelphia: Saunders, 1965.

Neuro-ophthalmology, Volume II. Symposium of the University of Miami and the Bascom Palmer Eye Institute. Lawton J. Smith, M.D. Price, $21.75. Pp. 278, illustrated. St. Louis: Mosby, 1965.

Ciba Foundation Symposium: Complement. Edited by G. E. W. Wolstenholme, O.B.E., F.R.C.P., F. I. Biol., and Julie Knight, B.A. Price, $12.50. Pp. 388 with 50 illustrations. Boston: Little, 1965.

Ciba Foundation Symposium: Caries-Resistant Teeth. Edited by G. E. W. Wolstenholme, O.B.E., F.R.C.P., F. I. Biol., and Maeve O'Connor, B.A. Price, $12.50. Pp. 338, with 43 illustrations. Boston: Little, 1965.

DEPROL®

meprobamate 400 mg. + benactyzine hydrochloride 1 mg.

Indications: 'Deprol' is useful in the management of depression, both acute (reactive) and chronic. It is particularly useful in the less severe depressions and where the depression is accompanied by anxiety, insomnia, agitation, or rumination. It is also useful for management of depression and associated anxiety accompanying or related to organic illnesses.

Contraindications: Benactyzine hydrochloride is contraindicated in glaucoma. Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use.

Precautions: *Meprobamate*—Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of preexisting symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side effects: Side effects associated with recommended doses of 'Deprol' have been infrequent and usually easily controlled. These have included drowsiness and occasional dizziness, headache, infrequent skin rash, dryness of mouth, gastrointestinal symptoms, paresthesias, rare instances of syncope, and one case each of severe nervousness, loss of power of concentration, and withdrawal reaction (status epilepticus) after sudden discontinuation of excessive dosage.

Benactyzine hydrochloride—Benactyzine hydrochloride, particularly in high dosage, may produce dizziness, thought-blocking, a sense of depersonalization, aggravation of anxiety or disturbance of sleep patterns, and a subjective feeling of muscle relaxation, as well as anticholinergic effects such as blurred vision, dryness of mouth, or failure of visual accommodation. Other reported side effects have included gastric distress, allergic response, ataxia, and euphoria.

Meprobamate—Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Dosage: Usual starting dose, one tablet three or four times daily. May be increased gradually to six tablets daily and gradually reduced to maintenance levels upon establishment of relief. Doses above six tablets daily are not recommended even though higher doses have been used by some clinicians to control depression and in chronic psychotic patients.

Supplied: Light-pink, scored tablets, each containing meprobamate 400 mg. and benactyzine hydrochloride 1 mg.
Before prescribing, consult package circular.

Wallace Laboratories / *Cranbury, N. J.*

CD-5726

When
insomnia
is a problem
in the

DEPRESSION ↔ INSOMNIA ↔ TENSION ↔ ANXIETY ↔

complex

TRY DEPROL® –
meprobamate 400 mg. + benactyzine hydrochloride 1 mg.
A LOGICAL FIRST CHOICE

usually restores
normal sleep quickly
by helping
to lift depression...
calm associated anxiety,
tension, and rumination

Wallace Laboratories / *Cranbury, N. J.*

CD-5726

Blood-glucose screening for all your patients?

...because "Abnormalities of glucose metabolism are among the [most common] encountered in clinical practice...."* Simple, quick, economical blood-glucose screening with DEXTROSTIX® Reagent Strips is practicable in every regular physical examination, emergency situation, and whenever hypo- or hyperglycemia may be of clinical significance—for "The precision and accuracy of DEXTROSTIX ...meet the need for an always available simple screening method...."* All that is required for screening with DEXTROSTIX is 60 seconds and a globular drop of capillary or venous blood. Abnormal readings will be a valuable aid to diagnosis; normals will help you establish an important baseline for future reference.

*Marks, V., and Dawson, A.: Brit. M. J. *1*:293, 1965.

DEXTROSTIX—
provides a clinically useful determination when performed according to directions†

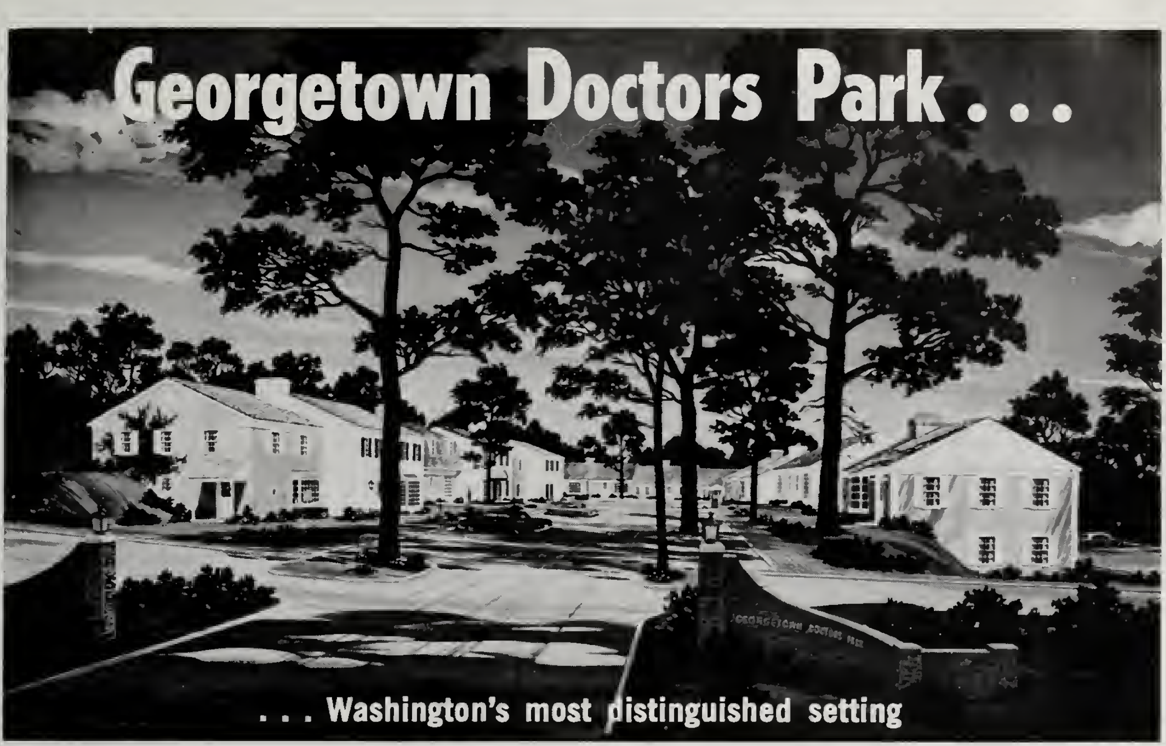
†DEXTROSTIX is not intended to replace the more precise analytical laboratory methods.

Yes—all your patients

AMES COMPANY, INC.
Elkhart, Indiana

AMES

09165


Georgetown Doctors Park . . .
GEORGETOWN DOCTORS PARK
. . . Washington's most distinguished setting

Architect: Edward H. Noakes & Associates, A. I. A.

For the medical man who seeks a lifetime answer to the question of location, there's no better choice than Georgetown Doctors Park. The location is matchless—the advantages are immeasurable. Your professional suite would be in the midst of the great Bethesda medical and research complex, but also in the heart of Washington's loveliest and most distinguished residential area. Our architect, a specialist in medical design, has created the kind of restful and private atmosphere that both patients and staff appreciate. It fronts on the park of the National Institutes of Health, is two minutes from Suburban Hospital and, is less than a mile from the Capital Beltway and leading arterials in the northwest area. Interior office arrangements are flexible and can be designed for you by our consultants. Each suite features a private entrance and is adjacent to landscaped parking areas accommodating more than 300 automobiles. Soundproofing, air-conditioning, year-round climate control and expert maintenance are assured in these superb Georgian suites. Distinguished in appearance and unmatched in location is Georgetown Doctors Park.

Construction by:
Coakley and Williams
2301 Kansas Avenue
Silver Spring, Maryland

Rental Arrangements by:
John J. Grady Management, Inc.
516 Wheaton Plaza Building
Wheaton, Maryland
Telephone: 946-2070

Inspections at the site arranged at your convenience—call 946-2070

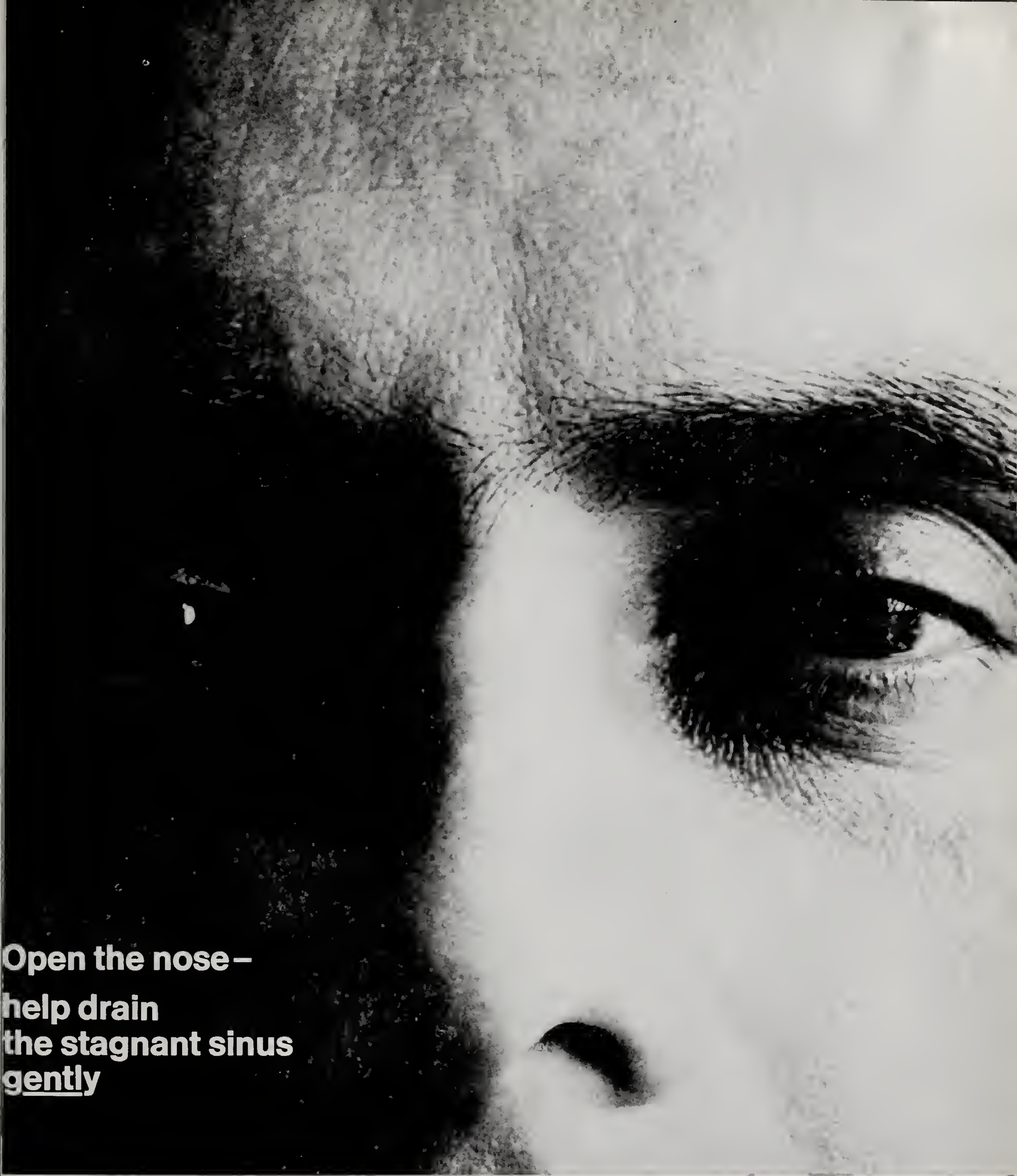
Georgetown Doctors Park • 5401 West Cedar Lane • Bethesda, Maryland

doing nicely,

thank you. (Father's off somewhere on a cloud.) And thanks to the great advances in medical care in the last 45 years, childbirth today is more an adventure than an ordeal. Pre-natal and post-natal recovery for both mother and child are likewise made easier by some drugs unknown to the profession as little as 10 years ago. In fact, 90% of our 200 most widely used drugs were not in existence before World War II. Should your physician ever prescribe a 'wonder' drug—or any other drug—for you or for any member of your family, Peoples is here to serve you with registered pharmacists on duty seven days a week, 365 days a year.

ALL PEOPLES DRUG STORES FILLED 6,321,215 PRESCRIPTIONS IN 1964...
A MEASURE OF THE TRUST PEOPLE PUT IN PEOPLES!

PEOPLES
PRESCRIPTION DRUG STORES



Neo-Synephrine is a standard among topical vasoconstrictors. It is unsurpassed for reducing nasal turgescence in colds; and a most valuable aid in preventing and treating sinusitis.

Neo-Synephrine stops the boggy feeling of colds at once—works against factors that induce sinusitis. With Neo-Synephrine nose drops, spray or jelly, turbinates shrink on contact, obstructed ostia open and drainage is re-established.

In sinusitis, Neo-Synephrine helps to promote drainage and hasten recovery.* Used promptly, it helps clear the stagnant sinus and lessen the chances of chronicity.

Neo-Synephrine HCl is available in:
- 1/8% solution for infants
- 1/4% solution for children and adults
- 1/4% pediatric nasal spray for children
- 1/2% solution for adults
- 1/2% nasal spray for adults
- 1/2% jelly for children and adults
- 1% solution for adults (resistant cases)

*Proctor, D. F.: The Nose, Paranasal Sinuses, and Ears in Childhood, Springfield, Ill., Charles C Thomas, 1963, p. 34.

Winthrop

Winthrop Laboratories, New York, N.Y. 10016

In colds and sinusitis

Neo-Synephrine® HCl

(brand of phenylephrine hydrochloride)

solutions/sprays/jelly

When tetracycline is indicated in these candidates for Candida...
1.
2.
3.
4.
5.

New low-cost tetracycline/antifungal therapy

Tetrex®-F

tetracycline phosphate complex-nystatin

Because new Tetrex-F (tetracycline phosphate complex-nystatin) is the most economical therapy of its kind that you can prescribe, it is a sound choice whenever tetracycline therapy is indicated in patients predisposed to monilial infections.

Who are these "candidates for Candida?"

1. diabetic patients
2. nonpregnant women with a history of recent or recurrent monilial vaginitis
3. elderly or debilitated patients
4. patients with a past history of moniliasis
5. patients on long-term tetracycline or corticosteroid therapy.

For these patients, Tetrex-F provides efficient tetracycline therapy against a broad range of infections *plus* protection against superinfection associated with the overgrowth of *C. albicans* in the G.I. tract.

Priced for savings

Tetrex-F is lowest in cost—priced 20% lower than most tetracycline/antifungal products.

BRISTOL THERAPEUTIC SUMMARY

For complete information, consult Official Package Circular.

Indications: Infections of respiratory, gastrointestinal, and genitourinary tracts and skin and soft tissues due to tetracycline-sensitive organisms.*

Contraindications: The drug is contraindicated in patients hypersensitive to its components.

Warnings: Photodynamic reactions have been produced by tetracyclines. Natural and artificial sunlight should be avoided during therapy. Stop treatment if skin discomfort occurs. No cases of photosensitivity have been reported with Tetrex. With renal impairment, systemic accumulation and hepatotoxicity may occur. In this situation, lower doses should be used. Tooth staining and enamel hypoplasia may be induced during tooth development (last trimester of pregnancy, neonatal period and childhood).

Precautions: Bacterial superinfection may occur. Infants may develop increased intracranial pressure with bulging fontanels. In gonorrheal therapy, serologic tests for syphilis should be conducted initially and monthly for 3 months.

Adverse Reactions: Glossitis, stomatitis, nausea, diarrhea, flatulence, proctitis, vaginitis, dermatitis, and allergic reactions may occur.

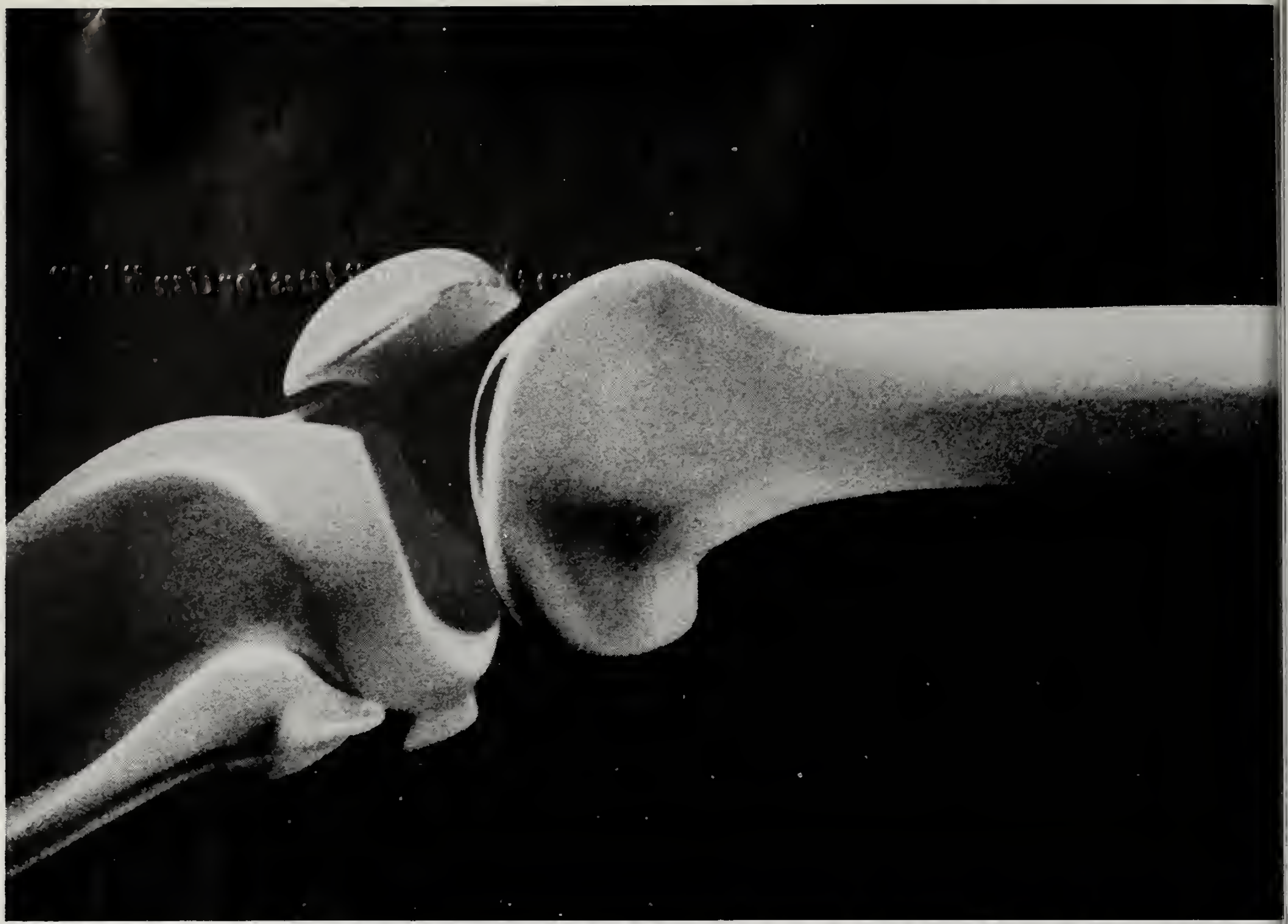
Usual Adult Dose: 250 mg. *q.i.d.* Continue therapy for 10 days in beta-hemolytic streptococcal infections. Administer one hour before or 2 hours after meals.

Available: Capsules, tetracycline phosphate complex, 250 mg., and nystatin, 250,000 units.

*In patients with increased susceptibility to monilial infections.

BRISTOL

BRISTOL LABORATORIES
Division of Bristol-Myers Co.
Syracuse, New York



Butazolidin® alka

phenylbutazone	100 mg.
dried aluminum hydroxide gel	100 mg.
magnesium trisilicate	150 mg.
homatropine methylbromide	1.25 mg.

Usually works within 3 to 4 days in osteoarthritis

The trial period need not exceed 1 week. In contrast, the recommended trial period for indomethacin is *at least 1 month.*

That's why it's logical to start therapy with Butazolidin alka—you'll know quickly whether or not it works. And usually, it will.

A large number of investigators have reported major improvement in about 75% of cases. Some patients have gone into remission. Relief of stiffness and pain may be followed quickly by improved function and resolution of other signs of inflammation. And Butazolidin alka is well tolerated, especially since it contains antacids and an antispasmodic to minimize gastric upset.

Contraindications
Edema, danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when the patient is senile, or when other potent drugs are given concurrently. Large doses are contraindicated in patients with glaucoma.

Precautions
Obtain a detailed history and a complete physical and laboratory examination, including a blood count. The patient should be closely supervised and should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools. Make regular blood counts. Use greater care in the elderly.

Warning
If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy.

Adverse Reactions
The most common are nausea, edema and drug rash. Hemodilution may cause moderate fall in red cell count. The drug may reactivate a latent peptic ulcer. Infrequently, agranulocytosis, generalized allergic reaction, stomatitis, salivary gland enlargement, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported but cannot definitely be attributed to the drug. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hepatitis, jaundice, and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently.

Dosage
The initial daily dosage in adults is 300-600 mg. daily in divided doses. In most instances, 400 mg. daily is sufficient. When improvement occurs, dosage should be decreased to the minimum effective level: this should not exceed 400 mg. daily, and is often achieved with only 100-200 mg. daily.

Also available: Butazolidin®,
brand of phenylbutazone
Tablets of 100 mg.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York BU-3804 P

Geigy

"All Interns are Alike"

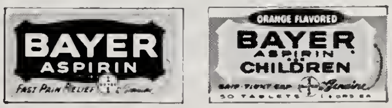
It stands to reason. They all go through the same training; they all have to pass the same tests; they all have to measure up to the same standards; they all are underpaid, too. Therefore, all interns are alike.

That's utter nonsense, of course. But it's no more nonsensical than what some people say about aspirin. Namely: since all aspirin is at least supposed to come up to certain required standards, then all aspirin tablets must be alike.

Bayer's standards are far more demanding. In fact, there are at least *nine specific differences* involving purity, potency and speed of tablet disintegration. These Bayer® standards result in significant product benefits including gentleness to the stomach, and product stability that enables Bayer tablets to *stay* strong and gentle until they are taken.

So next time you hear someone say that all aspirin tablets are alike, you can say, with confidence, that it just isn't so.

You might also say that all interns aren't alike, either.



CAPITAL NURSE REGISTRY

(Est. 1910)

Licensed
Practical
Nurses and
Practical
Nurses
Recommended
by Physicians

All Nurses Have Had Hospital Training

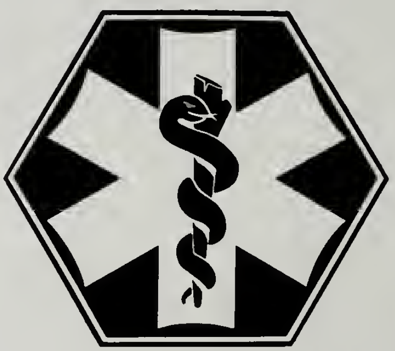
One of Washington's outstanding
Registries, serving physicians
and surgeons since 1910

LICENSED BY DISTRICT OF COLUMBIA

24 Hour Telephone Service

RAndolph 3-2600 or 3-1771

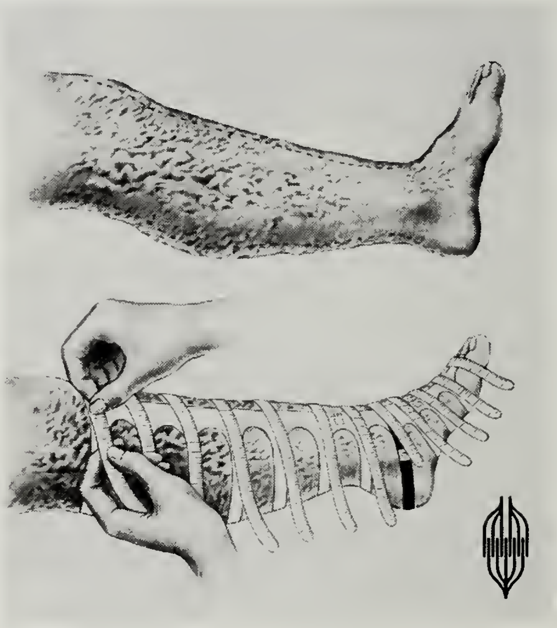
Emergency Medical Symbol



This is the universal emergency Medical Identification Symbol devised by the American Medical Association. The person who displays it carries upon his person information which should be known to anyone helping him during an accident or sudden illness. The symbol means: "Look for medical information that can protect life."

The World Medical Association has adopted the Emergency Medical Identification Symbol of the AMA as the "universal emergency medical information symbol."

EACH PATIENT
is precisely measured for a Jobst support.



Jobst venous pressure gradient supports are custom-made from precise measurements of your patient's extremity. Each support is individually engineered to exert the correct counter pressure according to your diagnosis and each support is guaranteed to fit, no strangulation, no puddling, no tourniqueting. Our service center is staffed with experts who will measure and fit your patient on your prescription only.

There is no charge for this service. Here is an advanced, clinically proved program of treatment for vascular deficiencies. For prescription blanks and medical reprints, have your secretary phone or drop us a card. Jobst Service Center 818 Eighteenth St. N.W. Phone: 298-5530 Washington, D. C. 20006

©1966 Jobst

The discomforts of

DIARRHEA
MUCOUS COLITIS
DIVERTICULITIS
SPASTIC URETERITIS
BLADDER SPASM

. . . are relieved by direct musculotropic action with

Trocinate®

BRAND THIPHENAMIL HCl

Available in 100 milligram pink sugar-coated tablets.

The high therapeutic index permits dosage sufficient to relieve spasm promptly. The usual initial dose is 4 tablets. Maintenance dosage is usually one or two tablets 4 times a day.

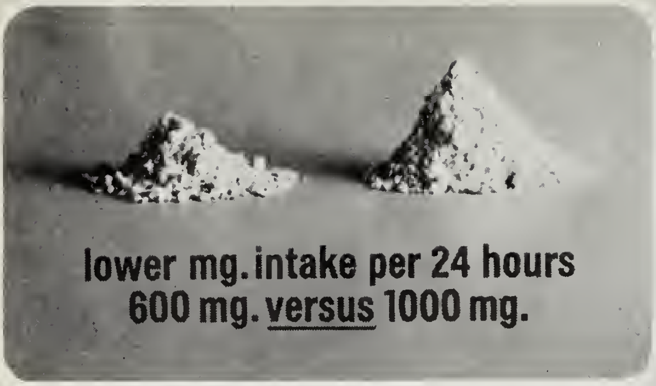
Trocinate *BRAND* THIPHENAMIL HCl

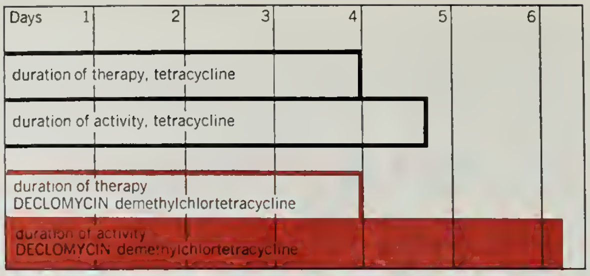
BETA-DIETHYLAMINOETHYL DIPHENYLTHIOACETATE HYDROCHLORIDE

. . . directly relaxes smooth muscle spasm
. . . combats hypermotility
. . . non-mydriatic – may be used in glaucoma

Trocinate (Thiphenamil HCl) has been found in three clinical studies, (J. Mo. Med. Assoc., 48:685-6; Med. Rec. & Annals, 43:1104-6; J. Urol., 73:487-93), to be effective and to be free of side-effects. Fifteen years of wide clinical usage has affirmed the safety and effectiveness of Trocinate.

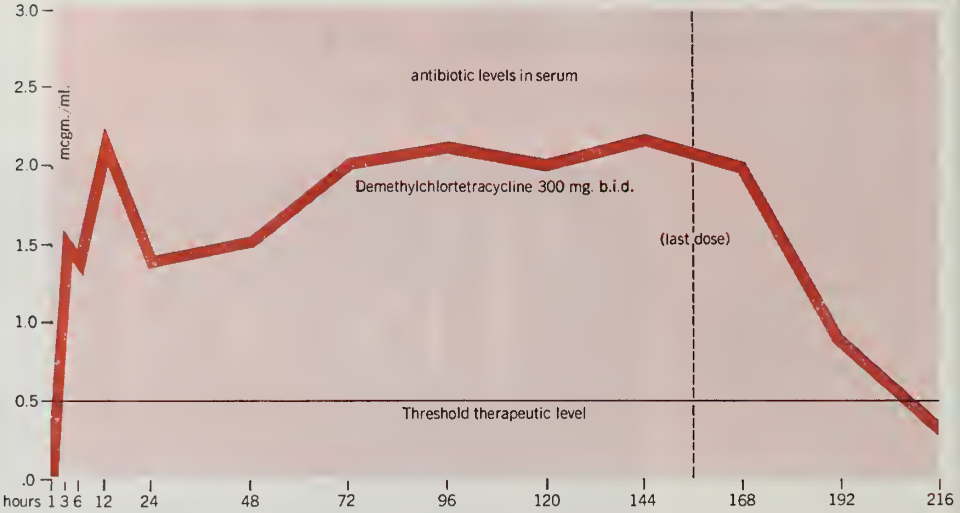
WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA
Manufacturers of ethical pharmaceuticals since 1856





1-2 days' "extra" activity

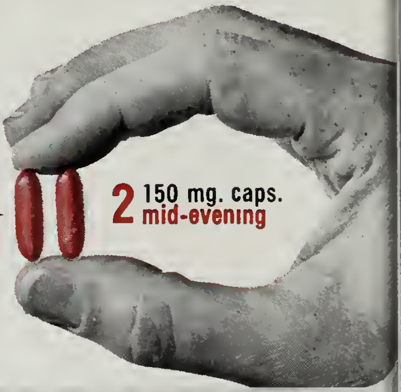
higher activity levels than other tetracyclines—with less peak-and-valley fluctuation



From Sweeney, W. M.; Dornbush, A. C., and Hardy, S. M.; Amer. J. Med. Sci. 243:296 (Mar.) 1962

2 150 mg. caps.
mid-morning

12 hours between doses



the option of b.i.d. dosage

the "extra" benefits raise the level of antibiotic control

DECLOMYCIN®

DEMETHYLCHLORTETRACYCLINE

150 mg. CAPSULES

Effective in a wide range of everyday infections—respiratory, urinary tract and others—in the young and aged—the acutely or chronically ill—when the offending organisms are tetracycline-sensitive.

Side effects typical of tetracyclines include glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis, dermatitis, overgrowth of nonsusceptible organisms, tooth discoloration (if given during tooth formation) and increased intracranial pressure (in young infants). Also, very rarely, anaphylactoid reaction. Reduce dosage in impaired renal function. Because of reactions to artificial or natural sunlight (even from short exposure and at low dosage), patient should be warned to avoid direct exposure. Stop drug immediately at the first sign of adverse reaction. It should not be taken with high calcium drugs or food; and should not be taken less than one hour before, or two hours after meals.

Capsules, 150 mg. and 75 mg. of demethylchlortetracycline HCl.
Average Adult Daily Dosage: 150 mg. q.i.d. or 300 mg. b.i.d.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York Lederle
8035-9720

VOLUME 35 • JANUARY 1966

EDITOR

Wallace M. Yater, M.D.

MANAGING EDITOR

George W. Cooley

ASSISTANT EDITOR

A. Louise Eckburg

EDITORIAL BOARD

Brian Blades, M.D.
Frederic G. Burke, M.D.
I. Phillips Frohman, M.D.
Naomi M. Kanof, M.D.
Zigmond M. Lebensohn, M.D.
Thomas M. Peery, M.D.
Herbert P. Ramsey, M.D.
George E. Schreiner, M.D.
Donald Stubbs, M.D.

CONSULTING EDITORS

Brig. Gen. Joe M. Blumberg, MC, USA, Director, Armed Forces Institute of Pathology
Irving B. Brick, M.D., Professor of Medicine, Georgetown University School of Medicine
W. Montague Cobb, M.D., Professor of Anatomy, Howard University College of Medicine
Vernon Knight, M.D., Clinical Director, National Institute of Allergy and Infectious Diseases
Walter Kurland, M.D., Chief, Outpatient Service, Veterans Administration Hospital
Colonel Loren F. Parmley, MC, USA, Chief Departmen of Medicine, Walter Reed General Hospital
Alvin E. Parrish, M.D., Associate Professor of Medicine, George Washington University School of Medicine
Captain Rufus J. Pearson, Jr., MC, USN, Director of Professional Services, U.S. Naval Hospital

•

THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

OFFICERS

Robert J. Caffey, M.D., President*
Henry D. Ecker, M.D., President-elect*
Lawrence A. Rapee, M.D., First Vice President*
Claudine M. Goy, M.D., Second Vice President*
Mr. George W. Cooley, Secretary-Treasurer*

EXECUTIVE BOARD

J. Spencer Dryden, M.D., Chairman (1966)
Karl C. Corley, M.D. (1967)
Edward W. Nicklas, M.D. (1968)
Paul R. Wilner, M.D. (1969)

DELEGATES TO AMA

Raymond T. Holden, M.D.*
C. Willard Camalier, Jr., M.D.*

LEGAL COUNSEL

Mr. Warren E. Magee

---

* Ex officio member of the Executive Board

MEDICAL ANNALS
of the
DISTRICT OF COLUMBIA

2007 Eye Street, N.W. Washington, D.C. 20006

The MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA is published monthly by the Medical Society of the District of Columbia for the promulgation of information of scientific, general medical and personal interest. All articles and correspondence should be sent to DR. WALLACE M. YATER, EDITOR, MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA, 2007 Eye Street, N.W., Washington, D. C. 20006.

EXCLUSIVE PUBLICATION: Articles are accepted for publication on condition that they are contributed solely to this journal.

MANUSCRIPTS: Manuscripts must be typewritten, double-spaced, and the original copy submitted.

ILLUSTRATIONS: Photographs and drawings for illustrations must be carefully marked and show clearly what is intended. MEDICAL ANNALS will bear the cost of engravings for 2 illustrations accompanying manuscripts submitted for publication. The cost of more than 2 engravings must be borne by the author.

REFERENCES: References should include the name of author (last name and initials), exact title of article, name of periodical, with volume, page (day of month in weekly), and year. References should be numbered consecutively in the order in which they appear in the text.

COPYRIGHT: Matter appearing in the ANNALS is covered by copyright but, as a rule, no objection will be made to its reproduction in reputable medical journals, if proper credit is given. However, the reproduction for commercial purposes of articles appearing in the MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA must have the approval of the Editor.

REPRINTS: Reprints may be obtained at cost.

ADVERTISING: Pharmaceutical advertising must be approved by the State Medical Journal Advertising Bureau, Inc. Other advertising copy may be accepted subject to the approval of the Editor. All copy or plates must reach the ANNALS office by the first of the month preceding publication. Display and classified advertising rates will be furnished on request.

SUBSCRIPTIONS: Subscription is included in the annual dues of members. To non-members the annual subscription price is: domestic, $5.00; Canadian, $5.50; foreign, $6.00, including postage; single copies, 50 cents.

Checks, etc. should be made payable to the Medical Society of the District of Columbia.

"All the Comforts of Home"..

for

POST OPERATIVE
MEDICAL
CONVALESCENT
DIABETIC
PARALYTIC
INVALID
AGED
CHRONIC
AMBULATORY
RETIRED
GUESTS, ETC.

AN ULTRA-MODERN HOME IN THE SUBURBS ON TEN ACRES
WITH A COUNTRY ATMOSPHERE

KENSINGTON GARDENS SANITARIUM

★ A MEDICAL INSTITUTION UNDER THE SUPERVISION OF REGISTERED NURSES ★
LICENSED BY STATE AND COUNTY

3000 McComas Avenue
Kensington, Maryland

- Rehabilitation Facilities
- Private and Semi-Private Rooms with Connecting Baths
- Beautifully Decorated
- Television in Spacious Lounges
- Large Porches
- Lovely Lawns and Shade Trees
- Supervised Diets
- Patients May Retain Their Own Physician
- 24-Hour Nursing Care
- Reasonable Rates
- Recreation and Physical Therapy

MEMBER OF

CARE OF THE AGED

AMERICAN NURSING HOME ASSOCIATION

MEMBER
AND MARYLAND NURSING HOME ASSOCIATION
ACCREDITED BY THE NATIONAL COUNCIL
FOR THE ACCREDITATION OF NURSING HOMES

For Further Information Phone

933-0060 or 933-0872

Proprietors-Administrators

LILLIAN H. and
GEORGE L. BRICKER

Nitroglycerin
rochlorothi
Paregoric
Belladonna
Codeine
Cortisone
Aspirin
Digitalis
Vitamins
Penicillin
Miltown®

An eminent role in medical practice

- Clinicians throughout the world consider meprobamate a therapeutic standard in the management of anxiety and tension.
- The high safety-efficacy ratio of 'Miltown' has been demonstrated by more than a decade of clinical use.

Miltown®
(meprobamate)

Indications: 'Miltown' (meprobamate) is effective in relief of anxiety and tension states. Also as adjunctive therapy when anxiety may be a causative or otherwise disturbing factor. Although not a hypnotic, 'Miltown' fosters normal sleep through both its antianxiety and muscle-relaxant properties.

Contraindications: Previous allergic or idiosyncratic reactions to meprobamate or meprobamate-containing drugs.

Precautions: Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of preexisting symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side effects: Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Usual adult dosage: One or two 400 mg. tablets three times daily. Doses above 2400 mg. daily are not recommended.

Supplied: In two strengths: 400 mg. scored tablets and 200 mg. coated tablets.

Before prescribing, consult package circular.

WALLACE LABORATORIES
Cranbury, N.J.

CM-9761

What is the single most important contribution to drug research?

It was made 175 years ago

when President Washington signed the first U.S. patent law. For patents mean drug progress. For example, of the 604 important drugs introduced worldwide since 1941, the majority originated in the U.S. drug industry. By contrast, a major west European nation, which has no patent protection, contributed one.

How great is the contribution of drug patents? The answer is told in life itself: our children live 10 years longer than we, and need not suffer polio, measles, diphtheria, tuberculosis, rheumatic heart disease, and a dozen other illnesses we grew up fearing. We can expect these benefits to multiply—as long as our patent system remains strong.

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W. Washington, D.C. 20005

An antibiotic of choice is one that works

TAO works

Susceptibility Results
Staphylococci [2,3,1]

# OF CULTURES	YEAR	% EFFECTIVE
6,725	1962	88.6%
5,440	1963	88.0%
10,384	1964	88.5%

β-Hemolytic Streptococci [2,3,1]

# OF CULTURES	YEAR	% EFFECTIVE
2,448	1962	89.5%
1,519	1963	95.2%
2,492	1964	96.7%

The Product

In a world study of antibiotics *in vitro*[1], TAO had an overall effectiveness of 87.3%, higher than chloramphenicol and erythromycin, and significantly higher than tetracycline and penicillin.

The Plus... Consistent Performance

Yet antibiotics must not only work. They must work consistently. Here are the results from the largest study of microbial susceptibility ever undertaken. In 29,048 cultures of overt staphylococcal and β-hemolytic streptococcal infections, note the consistency of results with TAO.

TAO®
[triacetyloleandomycin]

J. B. Roerig and Company, New York, New York 10017
Division, Chas. Pfizer & Co., Inc., Science for the World's Well-Being®

TAO Rx information

Indications: The bacterial spectrum includes: streptococci, staphylococci, pneumococci and gonococci. Recommended for acute, severe infections where adequate sensitivity testing has demonstrated susceptibility to this antibiotic and resistance to less toxic agents. **Contraindications and Precautions:** TAO (triacetyloleandomycin) is not recommended for prophylaxis or in the treatment of infectious processes which may require more than ten days continuous therapy. In view of the possible hepatotoxicity of this drug when therapy beyond ten days proves necessary, other less toxic agents, of course, should be used. If clinical judgement dictates continuation of therapy for longer periods, serial monitoring of liver profile is recommended, and the drug should be discontinued at the first evidence of any form of liver abnormality. It is contraindicated in pre-existing liver disease or dysfunction, and in individuals who have shown hypersensitivity to the drug. Although reactions of an allergic nature are infrequent and seldom severe, those of the anaphylactoid type have occurred on rare occasions. **References:** 1. Isenberg, Henry D.: Health Laboratory Science **2**:163-173 (July) 1965. 2. Fowler, J. Ralph et al: Clinical Medicine **70**:547 (Mar.) 1963. 3. Isenberg, Henry D.: Health Laboratory Science **1**:185-256 (July-Aug.) 1964.

ESTABLISHED 1873

WOMEN ASSISTANTS

In Washington and Suburbs

CALL COLUMBIA 5-7023
(*Six Trunk Lines*)

The S. H. Hines Company

Funeral Home

2901-03-05-07 FOURTEENTH STREET N.W
Northeast corner Harvard and 14th Streets

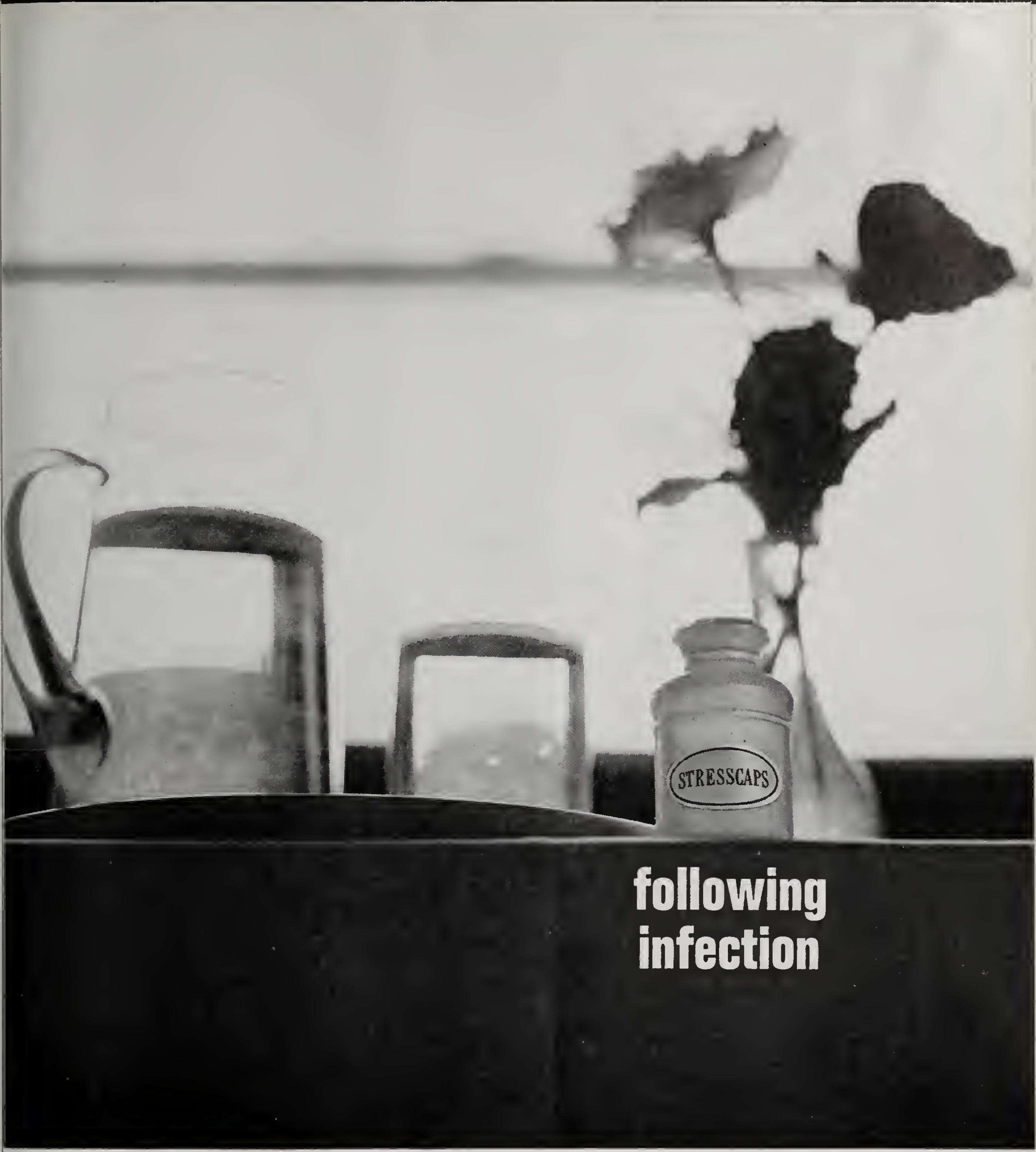
W. R. FRANK HINES
President and General Manager

MODERN AIR-CONDITIONED ROOMS WITH CHAPEL, PIPE ORGAN AND REPOSING ROOMS ARRANGED TO MEET EVERY REQUIREMENT AT NO ADDITIONAL CHARGE. CREMATIONS.

No forfeiture of VETERAN'S BURIAL ALLOWANCE

THE EXPENSE IS A MATTER OF YOUR OWN DESIRE

No Branch Establishments
Convenient parking facilities adjoining Funeral Home



STRESSCAPS B and C vitamins in therapeutic amounts...help the body mobilize defenses during convalescence...aid response to primary therapy. The patient with a severe infection, and many others undergoing physiologic stress, may benefit from STRESSCAPS.

STRESSCAPS® FOR PROFESSIONAL RECOMMENDATION ONLY

Stress Formula Vitamins Lederle

Each capsule contains:	
Vitamin B_1 (as Thiamine Mononitrate)	10 mg.
Vitamin B_2 (Riboflavin)	10 mg.
Niacinamide	100 mg.
Vitamin C (Ascorbic Acid)	300 mg.
Vitamin B_6 (Pyridoxine HCl)	2 mg.
Vitamin B_{12} Crystalline	4 mcgm.
Calcium Pantothenate	20 mg.

Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 (one month's supply) and 100 (three months' supply).

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY Pearl River, N.Y. Lederle
8693 4

For predictability of action, purity, and uniform potency...

The original DIGITOXIN

DIGITALINE NATIVELLE®

Presented in a full range of convenient dose forms, all interchangeable by reason of total absorption.

For complete prescribing information
See package circular, P. D. R. or write:
Professional Service Division
E. Fougera & Company, Inc.

In asthma and emphysema, OPTIPHYLLI
with its high absorption index attain
predictable, dependable therapeuti
blood levels, thereby relieving the feelin
of "internal suffocation". Prolonge
periods of remission and reduction in th
severity of attacks extend th
"atmosphere of freedo

The refreshing green mint flavor o
OPTIPHYLLIN tends to assure patien
acceptability and to prevent drug fatigue
Thus for efficacy and acceptability, it i
a drug of first choice in the treatmen
of asthmatic condition

Indicated in the management of bronchia
asthma, emphysema and other pulmonar
disorders associated with bronchospasm

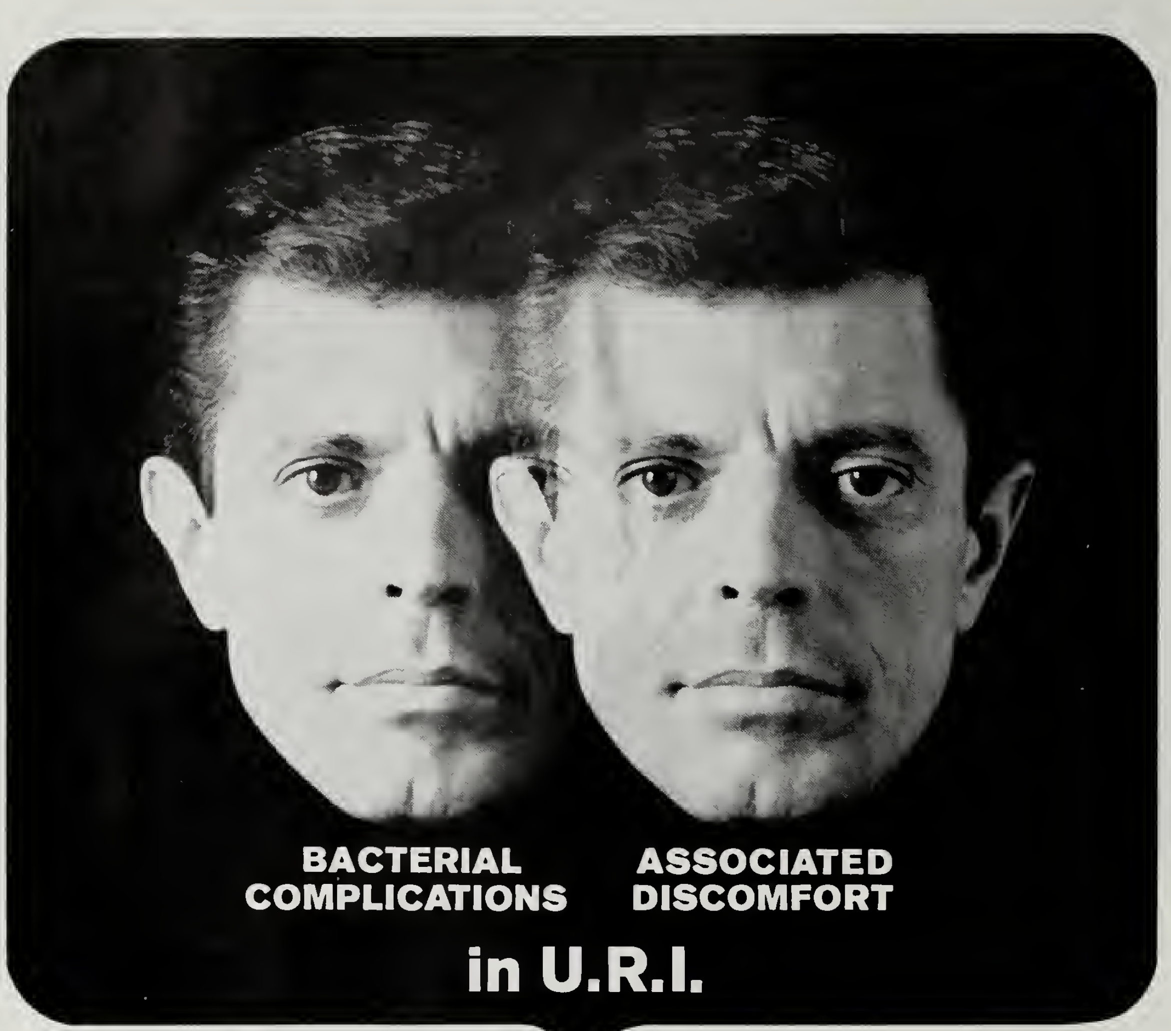
PRODUCTS OF **NATIVELLE INC.** DISTRIBUTED BY **E. FOUGERA & CO., INC.,** HICKSVILLE, NEW YOR

Air for the asthmatic...
in an atmosphere of freedom.

sage (Calibrated dosage cup dispensed with each prescription)
ch 15 ml. (1 tablespoonful) contains theophylline 80 mg., 20% alcohol.
e adult dose in acute asthma attacks is 75 ml. of OPTIPHYLLIN,
ovided theophylline in any form has not been given in the preceding
hours. A maintenance dose of 30 ml. of OPTIPHYLLIN can be initiated
o 8 hours later and maintained t.i.d. Maintenance doses in chronic
lmonary conditions associated with bronchospasm and in emphysema
ry from 45 ml. to 30 ml. t.i.d.
e pediatric dose in acute asthma is 0.5 ml. per pound of body weight,
t to be repeated in less than 6 hours, and not more than 2 such dosages
be given in 24 hours. Maintenance dosage varies from 0.3 ml. to 0.2 ml.
r pound of body weight t.i.d. until therapeutic effect is obtained.
TIPHYLLIN is best absorbed on an empty stomach. *(Since nausea
d vomiting usually herald early signs of excessively high theophylline
ood levels, these manifestations should serve as early warning signs
reduce or discontinue further administration of* OPTIPHYLLIN.)
de effects and precautions. As with all theophylline preparations,
casional nausea, epigastric and substernal burning pain and rare
isodes of vomiting may be encountered. Other minor complaints are
lpitations, dizziness, nervousness and headache. Overdosage,
rticularly in children, has led to severe vomiting, convulsions and
thargy. Theophylline should be given with caution in the presence of
ptic ulcer and gout.

Opti phyllin™
theophylline elixir

See how much more acceptable this "cordial" green mint flavor can be...



BRING THE TREATMENT TOGETHER IN A SINGLE PRESCRIPTION

ACHROCIDIN®

Tetracycline HCl-Antihistamine-Analgesic Compound

Each tablet contains:

ACHROMYCIN® Tetracycline HCl	125 mg
Acetophenetidin (Phenacetin)	120 mg
Caffeine	30 mg
Salicylamide	150 mg
Chlorothen Citrate	25 mg

Effective in controlling complicating tetracycline-sensitive bacterial infection and providing symptomatic relief in allergic diseases of the upper respiratory tract. Possible side effects include drowsiness, slight gastric distress, anorexia, overgrowth of nonsusceptible organisms, tooth discoloration (if given during tooth formation), photodynamic reaction to sunlight and increased intracranial pressure (in young infants). Average adult dosage: 2 tablets four times daily, given at least one hour before, or two hours after meals. Patient should avoid direct exposure to artificial or natural sunlight; and should not drive a car or operate machinery while on drug. Reduce dosage in impaired renal function. Stop drug immediately at the first sign of adverse reaction.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N.Y. Lederle

6085-2911

NATIONAL AND REGIONAL MEETINGS

January 31–February 3: National Academy of Sciences—National Research Council: Public Symposium on Scientific Aspects of Pest Control. Auditorium, Department of State, Washington. Address: Agricultural Board, NAS–NRC, 2101 Constitution Avenue, N.W., Washington, D.C. 20418.

February 2–6: American College of Cardiology. Conrad Hilton Hotel, Chicago. Address: Mr. William D. Nelligan, Executive Director, 9650 Rockville Pike, Washington, D.C. 20014.

February 3–9: Congress on Medical Education. Palmer House, Chicago. Address: Dr. Walter S. Wiggins, *Secretary*, 535 North Dearborn Street, Chicago, Ill. 60610.

February 8–12: American College of Radiology. Drake Hotel, Chicago. Address: Mr. William C. Stronach, *Executive Director*, 20 North Wacker Drive, Chicago, Ill. 60606.

February 14–19: American College of Physicians, Postgraduate Course No. 11: Medical Genetics. Johns Hopkins University School of Medicine, Baltimore. Address: Dr. Edward C. Rosenow, Jr., *Executive Director*, 4200 Pine Street, Philadelphia, Pa. 19104.

February 21–23: 22nd Annual Meeting of American Academy of Allergy. Americana Hotel, New York. Address: Mr. James O. Kelley, *Executive Secretary*, 756 North Milwaukee Street, Milwaukee, Wis. 53202.

February 28–March 3: Southeastern Surgical Congress. Marriott Motor Hotel, Atlanta. Address: Dr. A. H. Letton, *Executive Secretary*, 340 Boulevard Northeast, Atlanta, Ga. 30312

March 6–9: 55th Annual Meeting of International Academy of Pathology. Statler-Hilton Hotel, Cleveland. Address: Dr. F. K. Mostofi, *Secretary-Treasurer*, Armed Forces Institute of Pathology, Washington, D.C. 20305.

March 16: Northern Virginia Clinical Assembly. Arlington, Va. Address: Dr. Eugene R. Jacobs, National Orthopaedic and Rehabilitation Hospital, 2455 Army-Navy Drive, Arlington, Va.

April 4–8: 39th Annual Spring Congress in Ophthalmology and Otolaryngology. Gill Memorial Eye, Ear and Throat Hospital, Roanoke, Va. Address: Superintendent, P. O. Box 1789, Roanoke, Va.

May 21–22: AMPAC National Workshop. Sheraton-Park Hotel, Washington.

June 25: American Association for the Study of Headache. Conrad Hilton Hotel, Chicago. Address: Dr. Seymour Diamond, *Secretary*, 5214 North Western Avenue, Chicago, Ill. 60625.

MAXWELL
AND
TENNYSON
INC.
PHARMACISTS

"Where Pharmacy is a Profession"
M+T
Washington, D. C.

1801 Eye Street NAtional 8-0206
1835 Eye Street STerling 3-0360
1726 Eye Street 298-6540

Prescriptions called for and delivered without extra charge

Biologicals–Vaccines
Serums
Hypo-Allergenic Cosmetics

KALORAMA
CONVALESCENT
HOME, INC.

Licensed by the D. C. Department of Licenses and Inspections

INSTITUTIONAL CARE
for the medical management of
the acute stages of alcoholism.

2001 KALORAMA ROAD
at 20th Street, N.W. Adams 2-0063

Low host resistance?

Consider the "extra" antibacterial activity of Ilosone®

Occasionally, therapeutic failure is due to the patient's inability to mobilize his defenses sufficiently to overcome infection. Typical of this is the debilitated patient, the premature infant, or the diabetic. It is in these patients that the high levels of antimicrobial activity of Ilosone are especially useful. Ilosone has demonstrated antibacterial levels two to four times those of erythromycin base or stearate. Furthermore, it attains them earlier and maintains them longer. Even the presence of food does not appear to affect the activity of Ilosone.

Contraindications: Ilosone is contraindicated in patients with a known history of sensitivity to this drug and in those with preexisting liver disease or dysfunction.

Side-Effects: Even though Ilosone is the most active oral form of erythromycin, the incidence of side-effects is low. Infrequent cases of drug idiosyncrasy, manifested by a form of intrahepatic cholestatic jaundice, have been reported. There have been no known fatal or definite residual effects. Gastro-intestinal disturbances not associated with hepatic effects are observed in a small proportion of patients as a result of a local stimulating action of Ilosone on the alimentary tract. Although allergic manifestations are uncommon with the use of erythromycin, there have been occasional reports of urticaria, skin eruptions, and, on rare occasions, anaphylaxis.

Dosage: *Children under 25 pounds*—5 mg. per pound of body weight every six hours. *Children 25 to 50 pounds*—125 mg. every six hours. *Adults and children over 50 pounds*—250 mg. every six hours. For severe infections, these dosages may be doubled.

Available in Pulvules®, suspension, drops, and chewable tablets. Ilosone Chewable tablets should be chewed or crushed and swallowed with water.

Ilosone®

Erythromycin Estolate

Additional information available to physicians upon request. Eli Lilly and Company, Indianapolis, Indiana. 501280

Lilly

MEDICAL ANNALS

of the District of Columbia

January 1966 VOLUME XXXV • NUMBER 1

Howard University Number

This is the third of a fourth series of special numbers of the Medical Annals, the scientific material for which is supplied by medical institutions and scientific organizations in the Washington Metropolitan Area. For the Howard University Number the Editorial Board is indebted to Dr. W. Montague Cobb, Consulting Editor of the Medical Annals, who secured the papers which appear in this issue.

Studies in Sickle-cell Anemia

XXVIII. Clinical Observations on Prognosis and Outlook Beyond Childhood

JUANITA KAGWA, M.D.*, ANGELLA D. FERGUSON, M.D.†, ROLAND B. SCOTT, M.D.‡, AND WILLIAM H. BULLOCK, M.D.§

In the past medical observers not infrequently have referred to the unfavorable prognosis and shortened life expectancy in individuals with sickle-cell disease.[1, 2, 3] However, currently there are certain factors which tend to improve the outlook of persons with abnormal hemoglobinopathies. In this category we may include the following: (1) availability of better therapeutic agents, such as antibiotics, for the control of intercurrent infections; (2) the use of better diagnostic tools including chemical and electrophoretic techniques which may be used not only to arrive at an earlier diagnosis but also enable the clinician to accurately delineate the different types which have varying degrees of severity and different therapeutic requirements; and (3) better public health facilities in general which have resulted in improved control of preventable diseases so that the inhabitants of the U.S.A. have experienced an extension in life expectancy.

For these reasons it is our opinion that it would be timely to reëxamine the prognosis and health outlook for individuals with sickle-cell disease.

This investigation was conducted on adolescent and adult patients with sickle-cell anemia (SCA) in order to obtain some information about the morbidity and prognosis of the disease in individuals in this age period.

Method of Study

The subjects for this study were adolescents and adults and were obtained from a predominantly Negro population of the Washington, D. C. Metropolitan Area. These patients, representing both lower and middle socioeconomic groups, were seen regularly by private physicians or by staff physicians at this hospital. All subjects in this study were proven to have homozygous S-S disease or sickle-cell thalassemia by hematologic and electrophoretic studies. Data for this study were obtained by personal interview and hospital records. The following areas were investigated:

---

* Presently on the staff of Makerere University Medical College, Kampala, Uganda, East Africa; resident in pediatrics at Freedmen's Hospital, Washington, D. C., 1962–64.

† Associate Professor of Pediatrics, Howard University College of Medicine, Washington, D.C.; Associate Pediatrician, Freedmen's Hospital.

‡ Professor and Head, Department of Pediatrics, Howard University College of Medicine; Chief Pediatrician, Freedmen's Hospital.

§ Associate Professor of Medicine, Howard University College of Medicine; Physician, Freedmen's Hospital.

1. Present age and sex
2. Age at first symptoms and diagnosis
3. Frequency of crises
4. Age at menarche, marital status, obstetric, gynecologic and sexual problems
5. Complications of sickle-cell anemia, associated diseases and conditions
6. Education, occupation and hobbies
7. Evaluation of present status (i.e., physical, psychologic, personality and hematologic status).

Results

Present age and sex. Twenty patients varying in age from 15 to 40 years were studied. Of these 12 were females and 8 were males. All patients had homozygous S-S disease (SCA) except one who was diagnosed as sickle cell-thalassemia.

Age at first symptoms and diagnosis. A wide variation was found in the age at which symptoms referable to SCA were first noted. The first symptom noted by 10 per cent of the patients was "dactylitis." This occurred during their first year of life. Abdominal pains were noted in 20 per cent of the patients between the ages of 2 and 6 years; generalized pains, intermittent joint, long-bone and muscle pains were noted in all patients during adolescence and adult life.

In the older patients diagnosis was made between the ages of 25 and 38 years (within the last 2 to 10 years of the patient's life). The younger patients were diagnosed during infancy or early childhood.

Frequency of crises. The frequency of episodic crises seemed to decrease with increasing age as seen in table 1.

TABLE 1: Episodic Crises

Ages in Years	No. of Crises
0–10	8–10/year
10–20	3–5/year
20–30	1–2/year
30–40	1–2/3–5 years

Age at menarche, marital status, obstetric, gynecologic and sexual problems. The onset of menarche was found to be between 14 and 18 years of age in the 12 females studied. Secondary sex characteristics (as determined by the appearance of axillary and pubic hair, growth of external genitalia, etc.) were noted to be delayed in several patients. Some of the patients at 17 years of age had no axillary or pubic hair. Of the 20 patients studied, 11 or 55 per cent were married; no divorces or separations were noted. No complaints of impotence or weakness in sexual relationships were noted. All married patients had 2 to 4 children per family unit. Some of the offspring had homozygous S-S disease, some had sickle-cell trait, others were normal.

Obstetric problems consisted of severe postpartum thrombotic (pain) crises involving the joints, long bones and muscles.

Complications of SCA, associated diseases and conditions. The complications of SCA are noted in table 2.

TABLE 2: Complications

Complications	Per cent of Patients	Comments
Frequent URI	100	Noted in all patients, especially in winter, most cases leading to crises
Pneumonitis	55	Very severe, requiring intensive treatment and hospitalization; repeated bouts
Central nervous system	10	Severe headaches, unconsciousness, no residual damage
Recurrent delayed healing of ulcers of legs	20	Requiring frequent hospitalization and blood transfusions
Myocardial infarction	5	Resulting in congestive heart failure
Congestive heart failure	10	Two patients had congenital heart disease

Education, occupation and hobbies. When the educational background was assessed it was found that all patients had completed the ninth grade. Twenty per cent had no high school education; 40 per cent were high school students, not yet graduated; 30 per cent were high school graduates; 5 per cent were college students; and 5 per cent were college graduates.

The occupations varied according to the educational level and capabilities of the patients; 40 per cent were students, 10 per cent were maids, 10 per cent were employed as clerks, 5 per cent were waitresses, 5 per cent were barbers, 5 per cent were employed as laboratory technicians, 5 per cent were postmen, 5 per cent were architects, 5 per cent drove taxicabs, and 10 per cent were unemployed. All of the married women were able to perform their household duties and in some instances to engage in outside employment. One of the male college students drove a taxicab after school as a means of financial support.

The hobby most enjoyed by the male patients was bowling. The female patients usually were housewives and spent most of their time with family chores.

Evaluation of present status (i.e., physical and psychologic status). Physical examinations performed on 20 patients revealed that 13 (65 per cent) exhibited no gross abnormalities. Four patients or 20 per cent had delayed healing of leg ulcers, and 3 or 15 per cent had murmurs at the base of the heart. One patient, with a history of myocardial infarction 3 years previously, had an enlarged heart, a grade IV systolic murmur, and an enlarged liver extending 3 inches below the right costal margin. He also had an undescended right testicle.

The physical measurements revealed the height to range from normal to the upper range of normal for the respective age periods. The patients appeared tall and lean or underweight (asthenic habitus). The weight of most of the males was below 145 lbs.; the mean expected weight should have been 180 lbs. The female patients did not deviate as much from the normal height and weight as did the males. All of the patients showed the characteristic anemia.

Discussion

One of the factors affecting the clinical expression of SCA is the age of the patient. The severity and frequency of crises decreased with increasing age of the patient. The finding of increased incidence of crises in the first 2 decades may be related to an increase in the number and greater susceptibility to infections during this period and to an alteration in physiology during growth spurts in early childhood as well as endocrine adjustments that occur during adolescence.[4, 5] The age at which diagnosis was established varied from infancy to 35 years of age. This may be attributed to a lack of laboratory diagnostic techniques (i.e.. electrophoretic analysis of hemoglobin) in the early part of the century when joint pains were erroneously diagnosed as rheumatism, arthritis, or synovitis.[6] Abdominal pains were likewise sometimes misdiagnosed as acute surgical abdomen, cholecystitis, cholelithiasis, salpingitis, perineal abscesses, or a ruptured viscus.[6, 7] McGavack and Nussbaum[5] reported several cases in which exploratory laparotomy was performed and no gross abnormalities were found.

The sex of the patients also seemed to play an important role. Most of our female patients had a comparatively milder disease except during pregnancy and postpartum periods. Of the 12 women in our study, 4 or 33⅓ per cent experienced the first crisis during this period. This prompted a hematologic workup, and thus a diagnosis of SCA was made. Several authors[8-12] have pointed out the complicated course during pregnancy and the high maternal mortality rate in patients with SCA. Hodges and Bernstine[12] reported 21 cases of pregnant women with homozygous S-S disease in which the following symptoms were noted: thrombotic phenomena, pulmonary involvement, cerebral thrombosis, thrombus formation in the legs and pelvic vessels, and a diastolic pressure above 90 mm. Hg. They also stated that during pregnancy SCA patients frequently developed signs and symptoms of preëclampsia and sometimes eclampsia. At present the incidence of these complications appears to be on the decline.

Frequent attacks of respiratory infection were found to be the most prevalent complication of SCA. This may be due to the chronic anemia and an increased susceptibility to infection. Pneumonitis and painful crises were frequent sequelae requiring frequent hospitalization. In some instances hospitalization for episodes of pneumonitis often led to the diagnosis of SCA. It should also be remembered that stasis of the blood stream with plugging of the arterioles and resultant tissue damage producing a "pneumonia-like picture" is one of the pulmonary manifestations of this disease. Steinberg[13] reported that at necropsy the lungs of a patient with SCA showed fresh and organized thrombi in the small and medium-sized pulmonary vessels producing infarctions. McGavack and Nussbaum[5] reported that a mistaken diagnosis of pneumonia had been made in 4 of 214 cases.

Central nervous system involvement leading to a variety of symptoms from headache to unconsciousness (as a result of intracranial thrombotic crises) was noted in 2 or 10 per cent of the patients. No residual symptoms were noted in any of the patients after the acute phase of the crises. Hughes et al[14] found that central nervous system involvement was a common occurrence in the patients he studied. Patterson and co-workers[15] in 142 cases found 57 with signs and symptoms referable to the central nervous system. These findings were either transient or permanent depending on the area of the brain involved and the adequacy of collateral circulation. Sturgus[16] reported that the most common autopsy finding was engorgement of blood vessels with red blood cells and focal degenerative changes in the brain.

Recurrent indolent leg ulcers over the ankle joint area were encountered in some of the patients studied here; all cases required hospitalization, blood transfusions, and intensive local treatment. Steinfield and Klauder[17] stated that leg ulcers were present in all active cases of SCA in adults. Since that time leg ulcers have been described in patients of all ages. According to Diggs and Chung[18] the average age of appearance of leg ulcers is about 15 years. The etiology of the ulcers has never been adequately explained. Hughes et al[14] think that capillary and venous thrombosis is probably the primary cause. Cummer and LaRocco[19] explain the chronicity of the ulcers as the result of poor blood supply, poor nutrition, and lowered vitality of the tissue resulting from chronic anemia of long duration.

Myocardial infarction found in one of our patients was attributed mainly to thrombosis of the coronary artery as a result of a crisis. This patient later developed congestive heart failure secondary to the myocardial infarction. Two of the patients who suffered frank congestive heart failure in the absence of proved carditis were known to have congenital heart disease. Huck[20] explains the cardiac involvement on 4 factors: chronic anoxia of the myocardium due to severe prolonged anemia; circulatory stasis producing thrombosis in the pulmonary arteries resulting in pulmonary hypertension, right ventricular enlargement, and right heart failure; circulatory stasis producing thrombosis in the coronary artery resulting in damage to the myocardium; and severe anemia producing chronic anoxia to the body tissues, resulting in increased cardiac output and cardiac hypertrophy and dilatation.

Drug addiction was encountered in only 1 patient included in this study who was a "hospital cripple" since childhood. He had experienced numerous severe crises and frequent hospitalizations. His symptoms were relieved only by morphine, and as he grew older he pretended to experience crises in order to obtain the drug.

The education of our patients revealed more high school than college graduates. In certain cases the greater demands of the college curriculum could not be satisfied because of crises and frequent hospitalization.

The occupations of the SCA patients, as stated earlier, consisted of a wide range of professions. The patients worked a normal average 40-hour week, and some of the employers were unaware of the presence of the disease. Some patients had crises at least 1 to 3 times a year, and this necessitated absence from their jobs, which was at times interpreted as "alcoholic hangovers" by their employers. Some patients were frequently discharged by their employers because of unpredictable absenteeism. In some instances the patient engaged in self-employment in an effort to regulate the working hours. A few of the patients were unemployed because the frequency of their crises was such that they were unable to hold a steady job. A college student found it difficult to carry a full load at school since at least 6 to 8 months of the year were spent in the hospital.

The personality and psychologic status varied a great deal. Most of our patients did not feel helpless, because they were able to support their families financially. Even those who were "hospital cripples" did not feel useless, because they were able to accept their fate as a sufferer of a chronic incurable disease. One of the patients expressed a fear of making advance commitments because of the unpredictability of disabling crises. As he grew older he was able to overcome this problem as the frequency of his crises decreased. One of the patients revealed that he had to consider his disease when he was anticipating marriage and that he "had his girl friend tested for the presence of sickle hemoglobin" before he proposed to her for fear of begetting children with homozygous sickle-cell anemia. He stated that he was "willing to give her up" if the test had shown any evidence of hemoglobin abnormality. Some of our patients exhibited a sense of emotional dependency and a need to use their disease as a "crutch" for various shortcomings with reference to their daily accomplishments.

Summary

This is a study conducted on a total of 20 adolescent and adult homozygous sickle-cell anemia and sickle-thalassemia patients in order to obtain some information about the manifestation of this disease in these age groups. It was found in our studies that there was an inverse relationship existing between number of crises and age in years; the onset of menarche was delayed (onset ranging in age from 14 to 18 years) and secondary sex characteristics (as determined by appearance of pubic and axillary hair and growth of external genitalia) were also

(Continued on page 23)

Growth and Development of Negro Infants

VII. The Relationship of Parental Attitudes and Socioeconomic Pressures to Intelligence and Gross Motor Quotients During the Second Year of Life

ELAINE F. GERSON, M.A.*, AND ROLAND B. SCOTT, M.D.†

THE RELATIONSHIP OF THE IQ to environmental factors has been the subject of investigation since the introduction of intelligence testing. A correlation of cultural status and IQ test results has been demonstrated by Bayley[1] and others from preschool years on. Explanations for this correlation are thought to lie partly in the nature of the test materials and partly in the cultural differences in motivation for test performance. These factors favor the child of superior socioeconomic status because it is from his life experience that test materials are most frequently drawn.

Considering only gross motor development, it is of interest to note that for the Negro child in the first year of life this relationship not only does not obtain but is reversed. Williams and Scott[2] observed that the Negro infant in the age period of 4 to 18 months showed acceleration of gross motor development in the lower socioeconomic group. This acceleration was found to be related to specific methods of child care. These child-care techniques were seen primarily in the lower-income group of Negro parents. Wortis[3] reported that characteristics in child-rearing practices are related to class status.

In the New Haven study of Negro and white infants Pasamanick[4] compared the development of the 2 groups. On the basis of performance on the Gesell Development Schedules the average New Haven Negro infant was found to be "fully equal in behavioral development to the average New Haven white baby." Further, for the Negro babies there was a definite acceleration in gross motor behavior. Pasamanick concludes that "the onset of the depressing influence of exogenous factors upon Negro development might be construed as beginning during . . . the third half-year of life."

The present study‡ concerns itself with the 12- to 24-month age period. The aim was to investigate certain factors, apart from the nature of the test materials themselves, which influence intelligence test performance in the second year of life. In general, it was anticipated that at this age the emotional climate in which the child is raised is as highly correlated with intelligence test results as such socioeconomic variables as education of the mother, family income, or housing.

Specifically, the present study was designed to test the following hypotheses:

1. Mothers whose attitudes and behaviors are rated high in warmth will have children who test higher on intelligence tests than mothers rated low in warmth.
2. Mothers who are rated warm and not overly restrictive will have children who test higher in gross motor development than mothers rated low in warmth and high in restrictiveness.
3. Mothers who are rated as attempting routinely to accelerate development will have children who test higher on intelligence tests than those who only attempt to accelerate development occasionally.

All subjects were first-born Negro children, 12 to 24 months of age. These subjects were of 2 socioeconomic groups, low and middle.

In selecting the children every available first-born of this age group in the Well-Baby Clinic and in the practice of the referring pediatrician was approached for the study. The extent to which these persons who did coöperate represents a biased sample is not known. Refusals were rare among private patients. Among clinic patients of the low socioeconomic groups, refusals, broken appointments, and tardiness occurred more often than in the private-patient group. The initial socioeconomic breakdown was made on the basis of referral source. It was thought that the type of medical care selected for a child would reflect not only a family's financial level but would touch on the family's concept of status. Income alone, however, is not a sure index of class membership. It was believed, therefore, that a further sorting according to years of education of the mother would be appropriate.[5] The source of medical care is not inflexible for a given child and may depend on whether the child is sick or well, his or her age, and the current family finances. Group A consists of children whose mothers have at least a high-school education. Group B consists of children whose mothers have not completed high school.

---

* Clinical psychologist in Silver Spring, Md.

† Professor and Head, Department of Pediatrics, Howard University College of Medicine; Chief Pediatrician, Freedmen's Hospital, Washington, D.C.

‡ This study was carried out in 1957.

Procedure

For each child the procedure was as follows:

1. Administration of the Cattell Infant Intelligence Scale[6]
2. Administration of gross motor items of the Gesell Developmental Schedules[7]
3. Interview with parent and Child-Play observation introduced by instructing the mother, "Why don't you just put him down and let him play and we can talk." The same toys, arranged in the same fashion, were available to each child.

The notes on the interview, play observations, comments and behavior of the mother were rated on scales devised at the Fels Institute.

The scales used were designed to rate warmth, restrictiveness of regulation, and attempts to accelerate development. Each point on the rating scales has been carefully defined by Baldwin et al.[8]

Warmth, as shown by 4 subscales:

1. *Affection*—the extent to which the parent manifests a warm personal affection to the child, ranging from ardent to hostile.
2. *Intensity of contact*—the extent of reactivity of contact with the child ranging from vigorous to oblivious.
3. *Acceptance*—the extent to which the child is considered an intimate and inseparable partner ranging from utter devotion to open resentment.
4. *Direction of criticism*—the direction of the patient's reaction to the child's behavior ranging from warm praise to constant fault-finding.

Restrictiveness of regulation—the severity and number of the requirements to which the child is expected to conform, ranging from only regulations to preserve life to no regard for the child's wishes.

Acceleration attempts—the extent of the parent's striving to increase the rate at which the child's behavior is maturing, ranging from regular training to holding back growing up.

Results

Socioeconomic characteristics of sample. Table 1 presents the findings concerning social characteristics for the 2 socioeconomic groups. They were found to differ significantly in income, marital status, education, occupation, crowding-in-the-home, and maternal birthplace.

TABLE 1: Social Characteristics of the Two Sample Groups

CHARACTERISTIC	GROUP A	GROUP B
Mean annual family income	\$4,627* supports 3.9 persons	\$2,072† supports 5.2 persons
Marital status	1 unmarried mother	11 unmarried mothers
Mean education of parents	Mother: 15.1 yrs. Father: 15.8 yrs.	Mother: 10.5 yrs. Father: 10.3 yrs.
Maternal occupation	14 professional workers 0 domestics	0 professional workers 12 domestics
Crowding in the home (mean person per room ratio)	1.51	6.82
Maternal birthplace	4 born in south	13 born in south

* Omitting 2 families reporting no income.
† Omitting 5 families reporting no income.

Klineberg's findings[9] that Negro IQ test results go up with length of residences in the North suggested that it might be of interest to examine the babies' IQ in relation to maternal residence. Table 2 presents the findings of this analysis.

TABLE 2: Cattell Infant Intelligence Test Results and Maternal Birthplace

MATERNAL BIRTHPLACE	NO. OF MOTHERS	MEAN IQ OF BABIES
District of Columbia	31	108
North	10	107
South	17	105

The difference between the means is too small to be statistically significant ($p = <.4$) and it may, therefore, be concluded that in our study where the mother was born is not related to the child's performance on the Cattell Infant Intelligence Scale in the second year of life. Such differences as might develop later in the child's life are not evident at this age.

Test of Hypotheses

To evaluate the first hypothesis, predicting a relationship between parental warmth and intelligence, Group A, the middle socioeconomic group, was divided into those above and below the mean in "warmth" and the difference between the means tested by t test. IQ test scores varied with parental attitudes reflected in ratings of warmth (table 3). For the 2 groups of private patients having equally high income, education of mother, and housing, the IQ varies with the warmth rating. Higher warmth rating on the part of the parent is associated with higher IQ of the child. At the toddler age an emotional atmosphere of affection, contact with the child, and the acceptance of him so affect the child's behavior as to make statistically significant changes on IQ tests. With income, housing, maternal education held constant, 2 groups of like-aged toddlers show variations on intelligence testing dependent on the emotional climate between parent and child. Our study shows that given good native endowment, as evidenced by the mother's capacity to absorb formal education, a young child may do poorly on intelligence tests if the interaction between parent and child is such as to be rated as low in warmth. The lack of warmth not only depressed the IQ obtained on the Cattell Infant Intelligence Scale, but the gross motor behavior measured by the gross motor items of the Gesell Development Schedules as well.

TABLE 3: Relationship of Intelligence to Warmth—Group A

Number	Mean Warmth	Mean Cattell IQ	Mean Motor Quotient	Mean Ages in Month	Mean Income	Mean Maternal Education	Mean Rooms in Home
16 High warmth	266	117*	117†	17.6	$4,517	15 yrs.	6
14 Low warmth	183	103*	106†	18.9	$4,737	15 yrs.	6

* $p = <.001$ significant.
† $p = <.01$ significant.

Group B, the low socioeconomic group, was similarly divided into those above and those below the mean in rated parental warmth. For Group B, higher warmth is not associated with higher intelligence test results. However, unlike Group A, the Group B high and low warmth subgroups differ significantly in other relevant factors—income, maternal education, and housing. As shown in table 4, the Clinic Group B comparisons regarding the relationship between parental warmth and IQ are not so clear-cut. The groups differ in income, housing, and years of education of the mother. While no significant differences in IQ were noted despite the markedly differing warmth rating, the higher warmth mothers had much less formal schooling and income. Since Bayley[1] and others have shown maternal education to be correlated with intelligence at this age level, it would appear that in our study maternal warmth compensates in part for advantages of income and education. Further, since the mean income of the high-warmth group is almost half that of the low-warmth group it may be presumed that stress, such as poorer nutrition, may be having a negative effect on the intelligence test results of the high-warmth group as well. It is of much interest that we see in our study that even when income and maternal education are very low, when the mother-child relationship is warm there are no significantly lowered IQ test results as compared with a low-warmth but socioeconomically more privileged group. It may be hypothesized that the fact that the uneducated mother is warm with her child at this age level compensates for her poor educational background.

TABLE 4: Relationship of Intelligence to Warmth—Clinic Group B

Number	Mean Warmth Rating	Mean Cattell IQ	Mean Motor Quotient	Mean Chronologic Age	Mean Income	Mean Maternal Education	Mean Rooms in Home
14 High warmth	257	105*	115†	18.0	$1,501	8 yrs.	4
16 Low warmth	198	108*	117†	17.7	$2,843	12 yrs.	5

* $p = <.3$ not significant.
† $p = <.3$ not significant.

The second hypothesis held that gross motor behavior in particular would be affected by parental restrictiveness. Table 5 shows that when the group mean for restrictiveness is at or in excess of "moderate and practical but . . . shows little concern for child's freedom as an end," the gross motor quotient drops. The statistically significant drop in gross motor quotient from 117 to 106 appears to be related to high restrictiveness of regulation when accom-

TABLE 5: Relationship of Gross Motor Behavior to Parental Restrictiveness and Warmth

	Number	Warmth	Restrictive	Mean Motor Quotient
Low socioeconomic group	14 16	Above mean Below mean	Moderate Moderate	115* 117*
High socioeconomic group	16 14	Above mean Below mean	Moderate High	117† 106†

* $p = <.3$ not significant.
† $p = <.01$ significant.

panied by low warmth. Restrictive parental attitudes seem to have a dampening effect on the full use of a child's native capacity to use his body for big muscle activities such as walking, jumping, and balancing. Of the Group B babies, 13 out of 30 walked at or before 9 months; of the Group A babies, 3 out of 30 walked at or before 9 months of age. These differences are related to freedom from undue restrictiveness. As one clinic parent puts it, "Poor people cannot afford play-pens," therefore the baby is free to explore. Thus, it would seem to be further substantiated that acceleration in gross motor development is not a racial characteristic nor a social class relationship but is a reflection of the manner in which the child is managed.

The third hypothesis predicted that parental efforts at acceleration will result in higher intelligence test scores. Of the 60 parents studied 43 were observed to attempt "routinely" to accelerate development. The children of these parents had a mean IQ of 111. Of the 60 parents studied 17 parents made only "restrained and occasional" attempts at accelerating development. The children of these parents had a mean IQ of 97 which is significantly different from that of the accelerated group ($p = <.001$). It is of interest to note that of the 43 parents who routinely taught their children only 3 of the 43 were considered to do so "vigorously"; the remainder were moderate in their efforts. Of the 17 parents whose acceleratory attempts were restrained 9 were Group B parents, 9 Group A parents. Parents who attempt to accelerate development and those who do not are found in both socioeconomic groups.

Summary

Parents whose attitudes and behavior are rated as high in warmth have children who test significantly higher on intelligence tests than parents rated low in warmth. In fact, warmth is such a vital factor in the second year of life that it seems to balance out the effects of adverse socioeconomic factors. Warm mothers, as a group, have children who do better at this age on intelligence tests regardless of such factors as maternal education and income.

Further, it was found that parental warmth combined with freedom from undue restrictiveness resulted in significant advances in gross motor development in the second year of life. The age at which the toddler walks alone is related to the manner in which the child is handled and parental attitudes.

Children whose parents routinely attempt to accelerate their development test significantly higher on intelligence tests than those who do not attempt to accelerate development. Thus, we can conclude that in the second year of life the emotional climate in which a child lives appears to influence the use of his ability to a significant degree. Acceleration in gross motor development is not a phenomenon associated with race but rather with the manner in which the child is handled. At the toddler age, given warmth, the child profits from some stimulation from others in his world, as well as the right to explore and experiment without undue restraint.

The authors are grateful to Ann F. Neel, Ph.D., Pyschologist, Department of Pediatrics, for assistance in the preparation of the manuscript.

References

1. Bayley, N., and Schaefer, E.: Relationships between socioeconomic variables and the behavior of mothers toward young children. J. Genet. Psychol., 1960, **96,** 61.
2. Williams, J., and Scott, R. B.: Growth and development of Negro infants. IV. Motor development and its relationship to child-rearing practices in two groups of Negro infants. Child Develop., 1953, **24,** 2.
3. Wortis, H., and others: Child-rearing practices in a low socioeconomic group. The mother of premature infants. Pediatrics, 1963, **23,** 298.
4. Pasamanick, B.: Comparative study of the behavioral development of Negro infants. J. Genet. Psychol., 1946, **69,** 3.
5. Warner, W., Meeker, M., and Ells, K.: Social Class in America; a Manual of Procedure for the Measurement of Social Status. Chicago: Chicago Sci. Res. Ass., 1949.
6. Cattell, P.: The Measurement of Intelligence of Infants and Children. New York: Psychol. Corp., 1940.
7. Gesell, A., and Amatruda, C.: Developmental Diagnosis. New York: Hoeber, 1941.
8. Baldwin, A. L., Kalhoun, J., and Breese, F. H.: Appraisal of parent behavior. Psychol. Monogr., 1949, **63,** no. 4.
9. Klineberg, O.: Negro Intelligence and Selective Migration. New York: Columbia, 1935.

Diagnosis of Primary Carcinoma of the Gallbladder*

Based on the Study of Thirty-three Cases

SYLVIA A. FUERTES, M.D.†, ROQUE NIDO STELLA, M.D.‡, JACK E. WHITE, M.D.§,
JOSEPH D. WEAVER, M.D.‖, AND R. KELLEY BROWN, M.D.¶

THIS REPORT is based on data collected from 3 hospitals and the private practices of a surgeon, an internist, and a general practitioner. Freedmen's Hospital is located in the District of Columbia where the patient load is predominantly Negro. The authors were impressed by the small number of cases that could be found in its records. There appeared to be 5 to 7 times the rate of admissions for carcinoma of the gallbladder to the surgical service of the University Hospital in Puerto Rico. A careful look at the records of both institutions searching for diagnostic and etiologic clues seems justified.

Material and Methods

A search was made in the hospital records of Freedmen's Hospital in Washington, D. C. and the University Hospital in Rio Piedras, Puerto Rico. Four patients are derived from the private records of a surgeon (J.E.W.), an internist (R.K.B.), and a private practitioner (J.D.W.).

Histologic confirmation of gallbladder carcinoma was obtained in all. Thirty-three cases were found suitable for study.

Findings and Observations

Twenty-three of 33 patients were women, of whom 12 were white. There were 5 colored and 5 white men. The age breakdown shows only 1 male under the age of 30. The highest concentration was found in the age-group 61–69. There were 4 patients in the group 46–49, 5 in 51–56, 10 in 61–69, 8 in 72–77, and 5 in 80–90.

Pain was the initial symptom in 20 patients. In 9 others jaundice was the first symptom. Pain was absent in 2 patients with jaundice. In only 1 was pruritus the initial symptom. Pain in the right upper quadrant occurred in 24 patients. It was referred to the right back or flank in 11 and into the epigastrium in 3. The duration of discomfort varied from a week to more than a year. In 9 the acute symptoms were present for 21 days or less. In 23 patients with cholecystitis there were variations of 4 weeks to 1 year. Thirteen of these were found to have stones. Nine of the 13 patients (69.2 per cent) occurring in the continental United States had stones. Five of the 20 patients (25 per cent) from Puerto Rico had stones, and all had associated cholecystitis. Two without stones had cholecystitis.

The most frequent finding was right upper-quadrant pain. It occurred in 27 patients. In 25 hepatomegaly and weight loss were recorded. Jaundice, constipation, and a palpable mass were found in 20 cases. Biliuria was present in 14, weakness in 17, fatty-food intolerance in 15, acholic stools in 13, and belching, dyspepsia and pruritus in 14. Diarrhea and ascites were infrequent (table 1).

The duration of symptoms varied from 1 week to 10 years. However, a peak of 5 cases is noted at 1 year (table 2).

Although liver disease was mentioned in 24 patients, only 2 showed significant collateral circulation. One patient had chills and fever.

X-ray examination was carried out on 21 patients, and 14 had X-ray films of the gallbladder, with nonvisualization in 10. Mislead-

---

* Preliminary report presented, August 11, 1964, at the Second Annual Post Convention Scientific Seminar of the National Medical Association, held in San Juan, Puerto Rico.

† Instructor in Medicine, Howard University College of Medicine, Washington, D.C.

‡ Assistant Professor of Surgery, School of Medicine, University of Puerto Rico, San Juan, P. R.

§ Professor of Surgery and Director, Cancer Teaching Project, Howard University College of Medicine.

‖ In private practice at Ahoskie, North Carolina.

¶ Associate Professor of Medicine, Howard University College of Medicine.

TABLE 1: Signs and Symptoms

	No. of Cases
Right upper quadrant pain	27
Hepatomegaly	25
Recent weight loss	25
Liver disease	23
Palpable mass	22
Jaundice	21
Painless jaundice	5
Constipation	20
Nausea and vomiting	20
Anorexia	19
Cholecystitis	17
Cholelithiasis	17
Weakness	17
Fatty food intolerance	15
Biliuria	14
Pruritus	14
Belching and dyspepsia	14
Acholic stools	13
Diarrhea	7
Ascites	5
Collateral circulation	2
Chills and fever	1

ing findings in 7 cases followed gastroduodenal X-ray examinations in 18 patients. Diagnosis was strongly suspected in 1 patient after hepatic scan (figure 1).

TABLE 2: Duration of First Symptoms

	No. of Cases
1 week	1
2 weeks	1
3 weeks	1
1 month	1
3 months	3
4 months	3
5 months	1
6 months	2
8 months	1
9 months	1
10 months	1
1 year	5
2 years	3
3 years	2
4 years	1
10 years	2
"Several years"	3
Unknown	3
Total	33

Only 1 patient was admitted with a precise diagnosis, but often the diagnoses on admission were closely related to the gallbladder by way of anatomy, pathology or physiology. Carcinoma of the head of the pancreas in 11 and obstructive jaundice in 9 were the most frequent initial impressions (table 3).

Death, which came to all patients studied in this group, was found due to carcinomatosis in 21 cases (table 4).

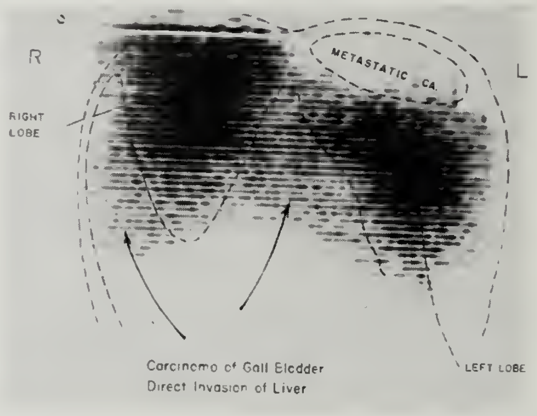


FIG. 1. Carcinoma of gallbladder showing direct invasion of liver.

Discussion

In 1777 Stoll published the first recorded cases of carcinoma of the gallbladder.[1] In 1861 Frerichs[2] noted a relationship between carcinoma of the gallbladder and stones. An association between carcinoma of the gallbladder and stones was found in 83 (33 per cent) of Infante Diaz's cases.[1]

TABLE 3: Clinical Diagnoses on Admission of 33 Cases of Primary Carcinoma of the Gallbladder

	No. of Cases
Carcinoma of the gallbladder	1
Carcinoma of the head of the pancreas	11
Obstructive jaundice	9
Carcinoma of the ampulla of Vater	4
Carcinoma of the stomach	4
Cirrhosis of the liver	3
Acute cholecystitis	3
Chronic cholecystitis	2
Chronic cholecystitis with cholelithiasis	2
Infectious hepatitis	2
Yellow jaundice, etiology?	2
Hepatomegaly, malignancy?	2
Hepatomegaly	1
Hepatoma	1
Gallbladder disease	1
Right upper-quadrant mass	1
Carcinoma of the hepatic flexure of the colon	1
Carcinoma of the colon	1
Acute abdomen	1
Chronic volvulus of the stomach	1

The association of stone and primary cancer of the gallbladder etiologically is exciting. There are series of cases reported in the literature[1, 2, 3]

TABLE 4: Causes of Death

	No. of Cases
Pulmonary embolism	1
Myocardial infarction	1
Shock and hemorrhage	2
Pneumonitis	1
Biliary enteric fistula	1
Peritonitis and evisceration	1
Carcinomatosis	21
Pulmonary edema and auricular fibrillation with congestive heart failure	2
Unknown	2
Total	33

which support the association of stone and primary carcinoma of the gallbladder in 60 to 90 per cent of the patients. Occasionally figures lower and those higher have been published (table 5).

TABLE 5: Comparative Study

Signs and Symptoms	Infante Diaz[1] (Per cent)	Rey et al[3] (Per cent)	Navarret et al[4] (Per cent)	Present Study (Per cent)
1. Anorexia				57.6
2. Pain and anorexia	88.89	77		57.6
3. Nausea and vomiting				87.8
4. Weight loss		41		60.6
5. Jaundice	41.66	38		63.6
6. Hepatomegaly		28		75.7
7. Tumor	66.66	64		66.66
8. Associated stones		33.33	69.26	42.42
9. Correct diagnosis	22.22	32		4

The wide variation in the incidence of stones between patients studied in Puerto Rico and the continental United States is certain to influence opinion and research into the cause of the 2 diseases. Nine of 10 patients in the latter country and 5 out of 20 from Puerto Rico had stones, 90 and 25 per cent respectively. One is hard pressed to do other than view an etiologic relationship with skepticism. Bile acids, infection, and foreign body have found their advocates. Malignant degeneration of benign tumors seems an attractive explanation but is not supported by accumulated evidence. A thorough search by geneticists for constitutional factors seems to be in order. Although obesity is noted, there is no constant relationship. Diabetes mellitus and female sex predomination are likewise suggestive. Some patients have no family history of cancer, and racial distribution is equal in both sexes.

Carcinoma of the gallbladder is a challenge to the profession diagnostically. Regularly the internist, before surgery or death, and the surgeon at the operating table have been stunned by its discovery. The tumor has not only mimicked beautifully the picture and posture of stone when viewed superficially but likewise has been as wholeheartedly mistaken for empyema of the gallbladder or cholecystitis. An attempt was made to relate diabetes mellitus and pancreatitis to complicating cholecystitis but in vain.

A number of symptoms occur in these patients. A careful look at the clinical picture should suggest the diagnosis more often. The most frequent complexus of symptoms seems to be right upper-quadrant distress, a hard tender mass (the golf-ball sign) without significant muscle-guarding, often spectacular enlargement of the liver with an indurated edge related to the bed of the gallbladder, progressive loss of flesh and strength, a nearly certain progressive icterus, and an early grave.

The frequent association of constipation, nausea, vomiting, anorexia, intolerance to fatty food, belching and dyspepsia should not be allowed to obscure manifestations which have etiologic rather than anatomic or physiologic implications. Yet nothing in the clinical course, environment, or constitutional background can be used as a basis for selection for medical programs of patients with cholelithiasis.[5]

Radiologic examination is likely to show a prominent indentation of the duodenal bulb by the gallbladder. The clinician may be misled by the findings in X-ray films of the upper gastrointestinal tract. Failure to visualize the gallbladder precludes collection of further etiologically important data from this medium. Since all patients died, an early diagnosis might offer escape from certain doom. Surgical removal of the gallbladder while the tumor was confined to the gallbladder led to at least 1 cure in another institution. A marginal shadow had been noted on radiologic examination.[6] The nature of the tumor, regularly adenocarcinoma, appears to lead to a fatal outcome. Characteristically, the liver is invaded. The gallbladder bed, subcapsular tissues, and the ill-defined area between the left and right lobes were densely infiltrated in the reported case. One-hundred and fifty millicuries of colloidal Au 198 was injected into the median cubital vein 2 hours before exposure. The correct clinical diagnosis was suggested by this hepatic scan (figure 1).

The picture, believed compatible with gallbladder carcinoma, was later confirmed by surgery. Early definitive diagnosis by more careful differentiation of the clinical picture may provide the surgeon with more favorable cases for excision. Importantly, detailed study designed to clarify etiologic factors can be better planned. The commonly mistaken diseases have received some attention in other studies.[7] Cancer of the pancreas, deadly when that organ is the source of involvement, is often distinguished by its persistent agony and predisposition to occur in the male.[8] After a careful look at the clinical picture in these patients one finds many points at variance with patients with uncomplicated calculous gallbladder disease. Loss of weight, a progressive downhill course, and hepatomegaly are probably the most helpful points of difference.

Summary and Conclusions

The records of 33 patients with histologic proof of primary carcinoma of the gallbladder were collected from several sources. Accurate diagnosis in the past was infrequent but may be possible when careful attention is directed to distress, mass, absence of muscle-guarding, loss of flesh and strength, and downhill course in a female. Association of cholelithiasis and primary carcinoma varies in patients studied in the continental United States and Puerto Rico. Some etiologic factors are still obscure. Early diagnosis may facilitate etiologically important research. Recently hepatic scan, using 150 mc colloidal Au 198, yielded diagnostically significant data.

References

1. Infante Diaz, S.: Carcinoma primario de la vesícula biliar (Estudio clinico patológico de 40 casos). Arch. Col. Med. El Salvador, 1961, **14**, 147.
2. Frerichs, F. T.: A Clinical Treatise on Diseases of the Liver. London: The New Sydenham Society, 1861.
3. Rey, A. M., Chattas, E., and Iorio, A.: Cancer de la vesícula biliar. Prensa Med. Argent., 1960, **47**, 2553.
4. Navarret, E. E., Goncalvez Borrega, N., and Espinosa, E.: Correlacion anatomoclínica en el cancer primitivo de vesícula biliar. Rev. Asoc. Med. Argent., 1963, **77**, 79.
5. Brown, R. K., in Medical Forum. Mod. Med., 1960, **28**, 220.
6. Bockus, H. L.: Lecture before the Graduate School of the University of Pennsylvania, 1944–45.
7. Thorbjarnarson, B., and Glenn, F.: Carcinoma of the gallbladder. Cancer, 1959, **12**, 1009.
8. Brown, R. K., Moseley, V., Pratt, T. D., and Pratt, J. H.: Early diagnosis of cancer of the pancreas based on the clinical and pathological study of one hundred autopsied cases. Amer. J. Med. Sci., 1952, **223**, 349.

Genetic Counseling at Clinical Center

The coöperation of physicians in the Washington Metropolitan Area is requested in the referral of patients to participate in an outpatient clinic for genetic counseling in hereditary disorders, newly established by the National Institute of Arthritis and Metabolic Disease at the Clinical Center of the National Institutes of Health.

In recent years an increasing number of diseases have been found to be hereditary in nature, and the basic metabolic defects in several of these conditions have now been elucidated. In many cases the lives of individuals with hereditary diseases have been significantly prolonged so that they are able to marry and to have children.

Despite these medical advances, it is still quite difficult for many patients and their physicians to obtain accurate information about the genetic aspects of such diseases. For this reason the outpatient clinic, staffed by physicians interested in human genetics and metabolic diseases, has been organized. The clinic physicians will provide counseling and in some conditions diagnostic help, while at the same time searching for ways to improve the availability and quality of genetic advice.

Physicians interested in having their patients with any type of hereditary disease considered for clinic counseling may write or telephone Charles J. Epstein, M.D., Clinical Center, Room 9-D-10, National Institutes of Health, Bethesda, Md. 20014; telephone: 656-4000, ext. 64650.

The Incidence of Hemoglobin-S in Human Blood Groups

ANNA L. CHERRIE, M.S.*, AND ANGELLA D. FERGUSON, M.D.†
With the Technical Assistance of Mr. James A. Ross‡ and Miss Mary E. Allen‡

THE RELATIONSHIP OF BLOOD GROUPS and Rh factors to certain diseases has been reported by several investigators.[1-6] Attempts to demonstrate a relationship between blood groups and Rh factors to hemoglobin types have been made by investigators of populations from other countries. As a result of hematologic and electrophoretic studies of Cherrie[7] in 1963 a relationship was indicated between sickle-cell hemoglobin and blood groups AB and O when a random sample of a college population was studied.

This study is an extension of this previous study and was performed in order to investigate further the possible relationship of blood groups and Rh factors to hemoglobin types.

Materials and Methods

The subjects for this study were Negro adults and children seen in the inpatient and outpatient departments of Freedmen's and D. C. General Hospitals and children being temporarily cared for at D. C. Junior Village, Washington, D. C. All subjects were proven to have some form of sickle-cell disease (i.e., homozygous S-S disease, sickle-cell trait, sickle-cell-hemoglobin-C disease, or sickle-cell thalassemia). The laboratory procedures used for diagnosis included a complete blood count, sickling test, peripheral smear, reticulocyte count, and paper electrophoretic analysis of the hemoglobin. Standard laboratory procedures were used to determine the blood groups and Rh factors of each subject.

Results

Three hundred and twenty-five subjects were studied. The distribution of patients by hemoglobin type is presented in table 1. The incidence of the blood groups and Rh factors in the total sample studied is presented in table 2.

TABLE 1: The Incidence of Hemoglobin Types in 325 Cases of Sickle-cell Disease

HB TYPE	TOTAL NO. OF EACH TYPE OBTAINED	PER CENT INCIDENCE
SS	104	32.0
AS	202	62.0
SC	13	4.0
SF	6	2.0
FINAL TOTAL WITH S-Hb	325	100

TABLE 2: Blood Groups and Rh Factors

	BLOOD GROUP								TOTAL		
	A		B		AB		O				
$Rh_0(D)$ factor	+	−	+	−	+	−	+	−	+	+	−
Total of sample	77	5	66	2	12	1	157	5	325	312	13
$Rh_0(D)$ per cent	93.9	6.1	97	3	94.3	7.7	96.9	3.1	100.0	96	4.0
Per cent of total	23	1.5	20	0.7	3.0	0.3	48	1.5	100		

The data in table 3 compare the frequency of the incidence of the blood groups, Rh factors and hemoglobin types of the sample studied here to the general Negro population. Table 4 relates the blood groups and Rh factors to the type of sickle-cell disease.

Discussion

In comparing individuals with hemoglobin-S, the blood groups were found to occur in the normal ratio. This was taken as evidence that the sample size was sufficient to give a representative picture.

According to Ludwin et al[5] there is no evidence for the linkage between the sickling gene and the Rh blood groups.

As observed earlier,[7] the sickling phenomenon

---

* Instructor in Microbiology, Howard University College of Medicine, Washington, D.C.

† Associate Professor of Pediatrics, Howard University College of Medicine.

‡ From the Department of Pediatrics, Howard University College of Medicine.

TABLE 3: Relationship of Blood Groups and Rh Factor to S-hemoglobin

BLOOD GROUP AND RH FACTOR	NO. OF SAMPLES IN EACH CATEGORY	PER CENT OF TOTAL SAMPLES	OCCURRENCE IN NORMAL NEGRO POPULATION	INCIDENCE OF HOMOZYGOUS S-Hb IN EACH CATEGORY	PER CENT OF BLOOD GROUP	INCIDENCE OF HETEROZYGOUS S-Hb IN EACH CATEGORY	PER CENT OF BLOOD GROUP
A	82	25.0	27	23	28	59	72
B	68	21.0	17	23	34	45	66
AB	13	4.0	4	4	31	9	69
O	162	50.0	52	48	30	114	71
TOTAL	325	100.0	100	98		227	
$Rh_0(D)$ +	312	96.0	94	89	28	23	71
$Rh_0(D)$ −	13	4.0	6	9	3	4	1

TABLE 4: Incidence of Various S-hemoglobin Types in the Human Blood Groups

HEMOGLOBIN TYPE	N = 82 A				N = 68 B				N = 13 AB				N = 162 O			
	+		−		+		−		+		−		+		−	
	No	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
SS	21	27	3	60	21	32	1	50	3	25	1	100	47	30	4	80
AS	52	68	2	40	44	67	1	50	6	50	—	—	98	62	1	20
SC	3	4	—	—	1	1	—	—	2	17	—	—	8	5	—	—
SF	1	1	—	—	—	—	—	—	1	8	—	—	4	3	—	—
TOTAL	77	100	5	100	66	100	2	100	12	100	1	100	157	100	5	100

seems pronounced in Rh-positive individuals. But, because of the high percentage of Rh-positive individuals normally found in any population, no conclusion would be valid in regard to the relationship of S-hemoglobin to the Rh factor.

It is also noted that more individuals of blood groups A and O than those with blood groups B and AB were examined who exhibited S-hemoglobin. In blood groups A and O the ratio of homozygous to heterozygous S-hemoglobin (1:3) is approximately the same, whereas in blood groups B and AB it was noted that the ratio of homozygous to heterozygous S-hemoglobin (1:2) is also approximately the same. However, the percentage of incidence of S-hemoglobin in both homozygous and heterozygous is nearly equal for all blood groups, as seen in table 3. That is, 28 per cent of the 82 S-hemoglobin blood group A samples obtained were homozygous and 72 per cent were heterozygous, which comprised 25 per cent of the total samples; 34 per cent of the 68 S-hemoblogin blood group B samples obtained were homozygous and 66 per cent were heterozygous, which comprised 21.0 per cent of the total samples; 31 per cent of the 13 S-hemoglobin blood group AB samples obtained were homozygous and 69 per cent were heterozygous, which comprised 4 per cent of the total samples; and 30 per cent of the 162 S-hemoglobin blood group O samples obtained were homozygous and 71 per cent were heterozygous, which comprised 50 per cent of the total samples.

In comparing the blood groups and the various S-hemoglobin groups P = 0.92. This high probability indicated that the samples were not sufficiently different as to suggest a significant difference in the blood group distribution in persons with SS and SA as in normals.

It is interesting to note the various electrophoretically distinguished hemoblobin types found in the samples studied, especially the fact that the incidence of SC-hemoglobin type was higher in blood group AB than in any other blood groups.

Summary

Hematologic and electrophoretic studies have been presented on 325 blood samples with S-hemoglobin obtained in the District of Columbia area.

The interpretation of the results suggests that there is no significant difference in the blood group distribution in individuals with SS and SA as in controls, and also that hemoglobin type SC shows the highest incidence in blood group AB.

(*Continued on page 20*)

Esophagoscopy

An Analysis of Two Hundred Cases

EMILE C. NASH, M.D., F.A.C.P.*, AND JAMES W. WILLS, M.D.†

ESOPHAGOSCOPY is the only in vivo method of directly inspecting the interior of the entire gullet. For complete examination of this organ the procedure is indispensable. The purpose of this presentation is to report our experience with 200 unselected cases, utilizing the Eder-Hufford esophagoscope.

The indications for esophagoscopy are as follows:

- Cirrhosis of the liver
- Dysphagia
- Unexplained upper gastrointestinal hemorrhage
- Unexplained weight loss
- Unexplained anemia
- Removal of foreign bodies
- Definite or suspicious evidence of organic disease demonstrated on the esophagram
- To search for a primary focus of unexplained metastatic neoplasm.

The following conditions contraindicate esophagoscopy:

- Acute inflammatory processes of the oropharynx
- Obstructive lesions of the pharynx
- Acute inflammatory lesions of the esophagus
- Aneurysm of the thoracic aorta
- Severe heart disease
- The uncoöperative patient
- Severe kyphoscoliosis
- Severe pulmonary disease

Material and Methods

All patients were hospitalized, and a complete history, physical examination, blood count and urinalysis were done. Esophagram, roentgenoscopy and roentgenography of the stomach and duodenum were done except in instances in which the patient's condition was so poor that the study was precluded.

In each case of cirrhosis the diagnosis was well documented by history, physical examination, needle biopsy of the liver, and in some instances open biopsy at laparotomy or autopsy. Liver function studies included the following:

- Bromsulfalein[1]
- Serum bilirubin and van den Bergh[2]
- Serum glutamic oxalacetic transaminase[3]
- Serum alkaline phosphatase[4]
- Thymol turbidity[5]
- Serum albumin and globulin[6]
- Prothrombin time[7]
- Cephalin flocculation[8]
- Total cholesterol[9]

Blood ammonia levels[10] were done in a few cases.

In the patients with definite or suspicious evidence of organic disease by esophagram, secretions for exfoliative cytology were obtained. In the group of patients with unexplained weight loss or evidence of widespread metastatic malignant disease, bone-marrow examination, barium enema and sigmoidoscopy were also done. There were no instances of foreign bodies.

Results

Cirrhosis of the liver. There was a total of 63 cases of cirrhosis of the liver. Thirty-two patients were males and 31 were females. All cases were classified as portal cirrhosis. Varices were demonstrated by esophagoscopy in 52 per cent. Esophagoscopy and esophagram were in agreement in only 20 per cent. The were no instances of radiographically demonstrable varices that were not demonstrable by esophagoscopy.

There was no correlation of any abnormal physical findings nor abnormalities of the commonly used liver function tests with the presence or absence of esophageal varices. Hemorrhoids were absent in the entire cirrhotic group. Arterial spiders were noted in only 20 per cent with varices and 7 per cent without varices. This low incidence is probably attributable to obscuration by the heavy pigmentation of most of the patients. In a few cases blood ammonia levels were determined during active bleeding and were invariably elevated in the group with varices. This contrasts with normal levels found in the nonvariceal group. We have had no experience with the ammonium tolerance test.

---

* Chief Medical Officer, Howard University Medical Service, District of Columbia General Hospital, Washington, D.C.

† Medical Officer, Pulmonary Division, Glenn Dale Hospital, Glenn Dale, Md.

Duodenal ulcer and hiatus hernia were demonstrated in 2 instances each. Both conditions allegedly occur with greater frequency in patients with cirrhosis.

Dysphagia. The majority of the patients with dysphagia had esophageal carcinoma. A word of caution concerning obstructing lesions is indicated when the Eder-Hufford scope is utilized. The procedure is "blind" for a short distance because of the flexible obturator, and this instrument should not be used in lesions in the upper third of the esophagus. Perforation is obviously the greatest hazard.

There was a total of 12 cases of esophageal carcinoma. In each instance the lesion was well visualized. Secretions for cytology were obtained by the technique of MacDonald et al.[11] Most of the tumors were located in the middle third of the esophagus. Biopsy revealed epidermoid carcinoma in 11 cases, and cytologic study of the secretions was positive for malignant cells in 9, or 75 per cent of the cases. In the 1 case in which both methods were negative the lesion was located in the intra-abdominal esophagus and the diagnosis was established after surgical exploration.

The remaining cases of dysphagia were due to achalasia in 2 instances and amyotrophic lateral sclerosis in a single case. As expected in the cases of achalasia the lumen was voluminous, but there was no evidence of esophagitis nor obstruction. Nothing of significance was found in the case of amyotrophic lateral sclerosis.

Unexplained upper gastrointestinal hemorrhage. The incidence of alcoholism in the patient clientele of this hospital is exceedingly high. Frequently the patient with upper gastrointestinal hemorrhage will complain of abdominal pain of pancreatic or other gastrointestinal origin, and at the same time there are clinical stigmata of liver disease. These complexities coupled with recent alcoholic debauches introduce several diagnostic possibilities requiring exact diagnosis.

There were 25 cases in which the initial survey failed to clarify the cause of hemorrhage. After repeated studies the final diagnoses were duodenal ulcer in 10, gastritis in 8, hiatus hernia in 6, and polyposis of the colon in 1. The chief value of esophagoscopy in this group was the elimination of the esophagus as the source of bleeding.

There was a high incidence of hepatomegaly and abnormal retention of bromsulfalein in this group. In several cases the abnormal bromsulfalein test was associated with anemia and reduced hepatic blood flow and returned to normal with correction of the blood deficit. In the remainder it persisted in spite of this correction. Otherwise a normal bromsulfalein was very reassuring in excluding cirrhosis with varices as a cause of the hemorrhage.

Unexplained anemia. The one instance of anemia, unexplained weight loss and metastatic malignant disease concerned a 38-year-old man who complained of severe back pain. He persistently denied dysphagia. Roentgenography of the gastrointestinal tract and proctosigmoidoscopy were normal. Stool examination was persistently positive for occult blood, and there was an iron-deficiency anemia. Postmortem examination revealed an epidermoid carcinoma of the middle third of the esophagus.

Esophagoscopy in the remaining cases was normal.

Discussion

Although esophagoscopy is indispensable to the complete examination of the esophagus, it is a hazardous procedure and should be performed only by physicians well trained in this method of examination. There were no complications in this series of 200 cases. There were no instances of foreign bodies since these accidents occur mostly in infancy and young children or mentally disturbed adults. Under either circumstance general anesthesia and special instrumentation are required, and these requisites obviously fall within the domain of the otolaryngologist or thoracic surgeon.

Several important attributes of the procedure have been exemplified. Unless there are definite contraindications esophagoscopy preceded by roentgenography of the esophagus, stomach and duodenum should be done in every case of cirrhosis of the liver. If varices are present the records will reveal this in the event of a subsequent upper gastrointestinal hemorrhage.

In this study varices were demonstrated by esophagoscopy in 52 per cent of the patients with cirrhosis as compared to 20 per cent by esophagrams. However, no special radiologic techniques were used to demonstrate varices.

Splenoportography is claimed to be the most certain method of demonstrating esophagogastric varices.[12, 13] Blood ammonia levels were invariably elevated during active bleeding from esophageal varices. Although the fructose tolerance test has been used to test the patency of a portacaval shunt, there is evidence that it may serve as an indicator of varices prior to shunting.[14] Isotopic splenoportography[15, 16] also seems promising.

It must be emphasized that if varices are absent on the initial evaluation of cases of decompensated cirrhosis, improved hepatic function is no indication of continued absence of varices. They may appear subsequently in spite of improvement in other aspects of the disease.

Its value in the actively bleeding patient is limited. Frequently the presence of large amounts of blood will preclude adequate examination. The veins also frequently collapse, resulting in a false negative report. In cases with multiple lesions the "string test" may be helpful in accurately localizing the bleeding site.[17]

As in clinical practice generally, this examination must be correlated with other findings. With a normal bromsulfalein in a nonjaundiced patient a negative esophagoscopy is very reassuring in localizing the lesion below the diaphragm. In interpreting the bromsulfalein it must be remembered that a patient with shock, diminished blood volume, fever, congestive heart failure, or severe fluid retention is likely to exhibit abnormal retention.

Among this total of 63 cases of cirrhosis there were only 2 instances each of peptic ulcer and esophagogastric hiatus hernia. A much higher incidence is generally reported.

The finding of malignant exfoliated cells in 75 per cent of the cases of esophageal cancer exemplifies the value of this procedure. Rubin and his associates[11] have reported positive findings in 94 per cent of cases. Its value in instances in which esophagoscopy and biopsy are contraindicated is obvious.

The 2 instances of achalasia were typical. However, there are cases in which roentgenography and esophagoscopy are not so conclusive. Abnormal motility patterns and a positive response to Mecholyl® aid in establishing the diagnosis in these instances.[18, 19] A negative Mecholyl test and an abnormal motility pattern give specific findings in diffuse spasm of the esophagus.[20] The normal esophagoscopy in the 1 patient with amyotrophic lateral sclerosis was not surprising, and the dysphagia was most likely due to a motor dysfunction which has been documented in other studies.[21] Code[22] and others[23] have demonstrated the usefulness of motility studies in the diagnosis of esophagogastric hiatus hernia, particularly when conventional diagnostic methods fail to clarify the patient's complaints.

The omission of esophagoscopy in the 1 case of unexplained anemia, weight loss and probable metastatic bone disease was unfortunate. It reëmphasizes the point that dysphagia is not present in all esophageal neoplasms and that X-ray studies may be normal.

Summary

Our experience with 200 unselected esophagoscopies has been presented. The incidence of esophageal varices in a total of 63 patients with portal cirrhosis was 52 per cent as determined by esophagoscopy as compared to 20 per cent by esophagram. Esophagoscopy is an integral part of the clinical evaluation of patients with cirrhosis of the liver. Except for the elevated blood ammonia level during active bleeding there was no correlation between the commonly used liver function tests and esophageal varices. The merits of splenoportography and other procedures as indicators of varices have been discussed.

Esophagoscopy is of distinct value in the emergency diagnosis of acute upper gastrointestinal hemorrhage. Exfoliative cytology is a necessary complement of esophagoscopy in patients suspected of having esophageal neoplasm. In some instances it will constitute the only safe method of diagnosis.

Its value and limitations in motor disturbances of the esophagus have been discussed. One case with definite indications which were overlooked has been presented. This procedure should be undertaken only by physicians well trained in this method of diagnosis. There were no complications.

The authors wish to express appreciation to Dr. Howard E. Ticktin, Chief Medical Officer of the George Washington University Medical Service, D.C. General Hospital, who made available the technical services of Mrs. Phyllis Evans and Mrs. Susan Grace for the blood ammonia determinations.

(*Continued on page 20*)

Falciparum Malaria

Report of Two Cases in Children

ALTHEA D. KESSLER, M.D.*

Two cases of acute malaria are reported in order to alert physicians in this area to the possible occurrence of this disease in recent immigrants.

Report of Cases

Case 1. W. W., aged 7 years, a native of Monrovia, Liberia, arrived in Washington 4 days before admission to Freedmen's Hospital on September 2, 1965. Three days before admission he had fever but the following day felt perfectly well. The evening before admission he complained of chilliness and had a brief generalized convulsion followed by an elevation of temperature.

The birth and development had been normal. On 3 previous occasions since the age of 1 year he had had similar convulsions with febrile illness. To the parents' knowledge he had not been treated for malaria. The father had a history of febrile convulsions in childhood.

On admission the boy was well developed but acutely ill. The rectal temperature was 103°F. There was a herpetic lesion on his lip. The spleen was moderately enlarged, firm and nontender.

Blood glucose, calcium and phosphorus were within normal limits. Urinalysis was negative. The spinal fluid was clear and showed no growth. Agglutinins for salmonella were absent. The hemoglobin was 11.7 Gm. There were 8,000 white blood cells per cu. mm., with eosinophils 4 per cent, stabs 2 per cent, segmented polymorphonuclears 32 per cent, lymphocytes 58 per cent, and monocytes 4 per cent. Ring forms of *Plasmodium falciparum* were identified in blood smears (figure 1).

The child was afebrile and felt well the day after admission. The temperature curve (figure 2) showed peaks on the second, sixth, seventh, and eighth days after admission. There were no further convulsions. At the height of the fever the boy complained of headache and backache. During defervescence sweating was profuse.

One week after admission chloroquine was administered orally, 300 mg. for the first dose followed by 150 mg. 8 hours later, then 150 mg. daily for 3 days. The temperature fell to normal within a few hours and remained so. The boy was discharged in good condition at the completion of therapy.

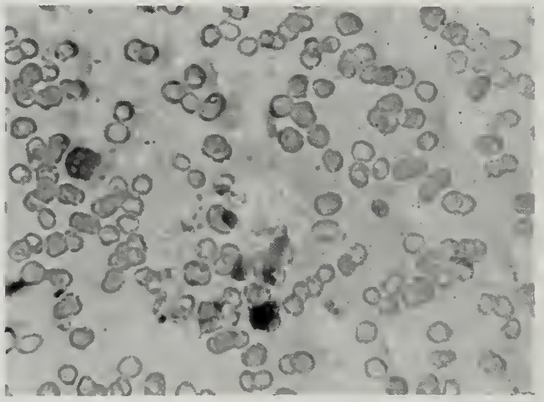


FIG. 1. Ring forms of *Plasmodium falciparum* in peripheral blood.

Case 2. B. W., aged 5 years, brother of the above patient, was admitted at the same time. He gave a similar history of recent onset of fever and convulsions. He also had a past history of febrile convulsions. On admission the temperature was 101.8°F. Other physical findings were within normal limits. The spleen was not palpable.

The hemoglobin was 11.4 Gm. There were 3,300 white blood cells per cu. mm., with eosinophils 1 per cent, segmented polymorphonuclears 57 per cent, lymphocytes 40 per cent, and monocytes 2 per cent. *Plasmodium falciparum* was identified in the blood smear.

The temperature curve is shown in figure 3. The child was given the same dose of chloroquine as his brother. His response was similar and satisfactory.

Discussion

Falciparum malaria is the prevalent variety in West Africa. The majority of native children are attacked by the age of 1 year, and the mortality in this age-group is high. Manson-Bahr[1] states that 9.0 per cent of the deaths in infants occurring in hospitals in Nigeria is due to malaria. A relative immunity is attained in the survivors by 8 to 12 years of age.[2] Parasites may exist in the blood for many months

---

* Professor of Pediatrics, Howard University College of Medicine; Pediatrician, Freedmen's Hospital, Washington, D. C.

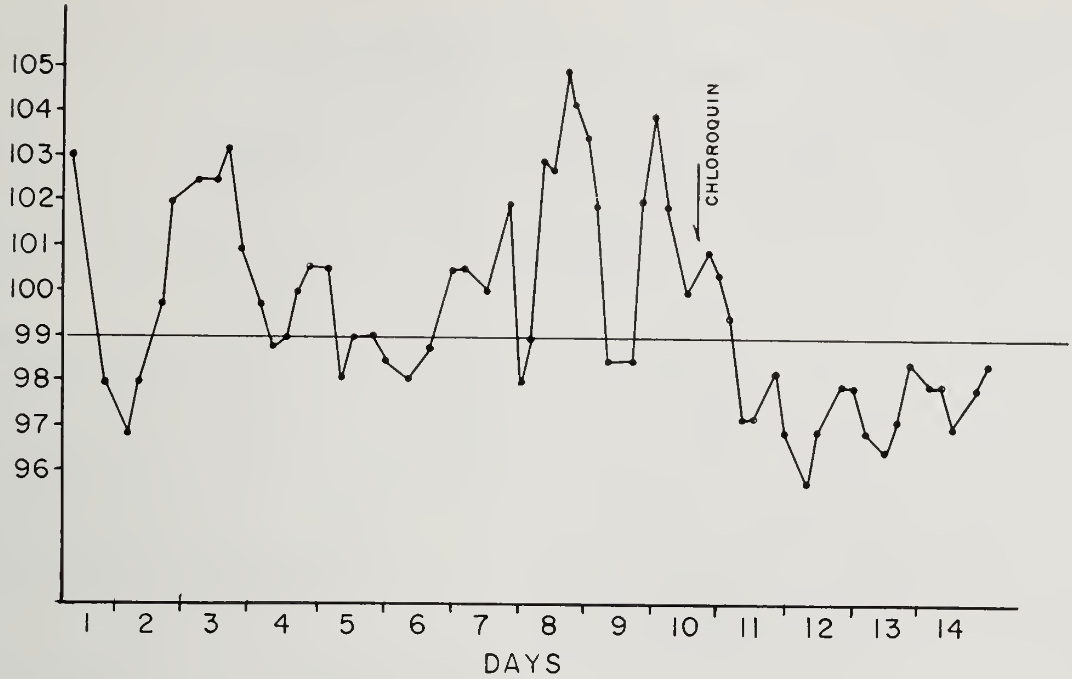


FIG. 2. Temperature chart of 7-year-old boy with falciparum malaria.

without producing symptoms until an acute attack is precipitated by fatigue or intercurrent infection. In view of the mildness of their symptoms it is possible that our patients had previous attacks. On the other hand, there was no anemia as might be expected in chronic malaria.

The temperature curve in falciparum malaria is less characteristic than in other types but usually shows peaks at 48-hour intervals. The regularity of the temperature curve may be less well defined in the first few days of an attack. Daily peaks occur if more than 1 generation of parasites are present.[1]

Except for splenomegaly, which may be absent early in the disease, there are no characteristic physical findings. The diagnosis may be

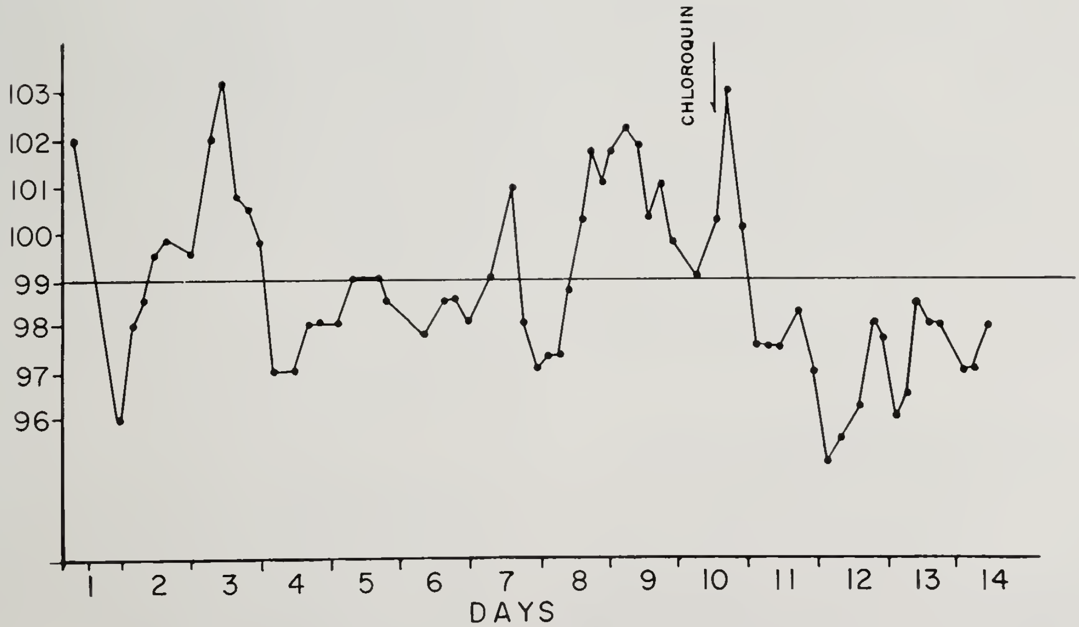


FIG. 3. Temperature chart of 5-year-old boy with falciparum malaria.

unsuspected until the parasite is found on a routine blood smear.

The treatment given our patients was that recommended by Trowell and Jelliffe.[3] Chloroquine or quinacrine is recommended for falciparum malaria.[2] Quinine is not recommended for treatment of the acute attack since it appears to be responsible in some cases for precipitating an attack of blackwater fever.[1] This is characterized by acute hemolysis and hemoglobinuria which resembles the reaction seen after transfusion of incompatible blood. As a complication of malaria it occurs only in the falciparum variety.

Cerebral involvement is the complication responsible for the majority of deaths in young children with falciparum malaria. The symptoms are hyperthermia (107° F or more), delirium, focal neurologic signs, convulsions, and coma. It is usually fatal. It is apparent that our patients had no such severe complication. Their seizures were undoubtedly simple febrile convulsions.

Summary

Two cases of falciparum malaria have been reported in siblings recently arrived from Africa. They showed excellent response to treatment with chloroquine. Physicians are alerted to the possibility of this disease in febrile individuals who arrive in the U.S.A. from areas of the world where this disease is endemic.

Dr. Madison S. Briscoe, Professor of Microbiology at Howard University, gave help in the laboratory identification of the parasite. Dr. Margaret E. Grigsby, Associate Professor of Medicine, provided advice regarding therapy.

References

1. Manson-Bahr, P. H., editor: Manson's Tropical Diseases, 14th ed. Baltimore: Williams & Wilkins, 1954, p. 31.
2. Nelson, W. E., edited by: Textbook of Pediatrics, 8th ed. Philadelphia: Saunders, 1964, p. 653.
3. Trowell, H. C., and Jelliffe, D. B.: Diseases of Children in the Subtropics and Tropics. London: Arnold, 1958.

Incidence of Hemoglobin-S—Cherrie and Ferguson

(*Continued from page 14*)

References

1. Chabeuf, M., and Zelding, G.: Blood groups and drepanocytosis on Saint Mary's Island (Madagascar). Med. Trop. (Marseille), 1962, **22,** 261.
2. Dougherty, L.: The interaction between blood types and disease. Nurs. Forum, 1964, **3,** 46.
3. Hiernaux, J.: Genetic data on six populations of the Congo Republic. Ann. Soc. Belg. Med. Trop., 1962, **42,** 145.
4. Hiernaux, J.: On the relation between sickle-cell trait and Rh blood groups in the Congo. Ibid., 1963, **43,** 879.
5. Ludwin, I., Limentani, D., and Dameshek, W.: Linkage tests of Mediterranean anemia with blood groups, blood types, Rh factors and eye color. Amer. J. Hum. Genet., 1952, **4,** 182.
6. Solanki, B. R., Shukla, R. N., and Sood, J. J.: Study of blood groups of Mahars and Marathas showing presence of sickle-cell trait at Nagpur. Indian J. Med. Res., 1960, **48,** 146.
7. Cherrie, A. L.: Sickling phenomenon in a college population. J. Nat. Med. Ass., 1963, **55,** 142.

Esophagoscopy—Nash and Wills

(*Continued from page 17*)

References

1. Gaebler, O. H.: Amer. J. Clin. Path., 1945, **15,** 452.
2. Mallory, H. T., and Evelyn, K. A.: J. Biol. Chem., 1937, **119,** 881.
3. Karmen, A., Wroblewski, F., and LaDue, J. S.: J. Clin. Invest., 1955, **34,** 126.
4. Bodansky, A.: Amer. J. Clin. Path., 1937, **7,** 51.
5. Shank, R. E., and Hoagland, C. L: J. Biol. Chem., 1946, **162,** 133.
6. Kingsley, G. R.: Ibid., 1939, **131,** 197.
7. Quick, A. J.: Amer. J. Clin. Path., 1940, **10,** 222.
8. Hanger, F. M.: J. Clin. Invest., 1939, **18,** 261.
9. Schoenheimer, R., and Sperry, W. M.: J. Biol. Chem., 1934, **106,** 745.
10. Seligson, D., and Hirahara, K.: J. Lab. Clin. Med., 1957, **49,** 962.
11. MacDonald, W. C., Brandborg, L. L., Taniguchi, L., and Rubin, C. E.: Ann. Intern. Med., 1963, **59,** 332.
12. Tumen, H. J.: Gastroenterology, 1961, **41,** 517.
13. Davidoff, D. E.: Amer. J. Gastroent., 1963, **39,** 234.
14. Martin, L. W., and Bryant, L. R.: Arch. Surg. (Chicago), 1962, **85,** 783.
15. Green, J. P., and Schwartz, S. I.: Amer. J. Dig. Dis., 1963, **8,** 908.
16. Ibrahim, M. S., and Abdel-Wahab, M. F.: Brit. Med. J., 1961, **2,** 623.
17. Traphagen, D. W., and Karlan, M.: Surgery, 1958, **44,** 644.
18. Kramer, P., and Ingelfinger, F. J.: Gastroenterology, 1951, **19,** 242.
19. Hightower, N. C., Jr., Olsen, A. M., and Moersch, H. J.: Ibid., 1954, **26,** 592.
20. Code, C. F.: An Atlas of Esophageal Motility in Health and Disease. Springfield, Ill.: Thomas, 1958.
21. Smith, A. W. M., Mulder, D. W., and Code, C. F.: Proc. Mayo Clin., 1957, **32,** 438.
22. Code, C. F., Kelley, M. L., Schlegel, J. F., and Olsen, A. M.: Gastroenterology, 1962, **43,** 521.
23. Atkinson, M., Edwards, D. A. W., Honour, A. J., and Rowlands, E. N.: Lancet, 1957, **2,** 1138.

Insulin-resistance

Report of a Case and Review of the Subject

ADRIAN O. HOSTEN, M.D.*, CARLTON P. ALEXIS, M.D.†, AND W. LESTER HENRY, JR., M.D., F.A.C.P.‡

WITH TECHNIQUES for the early diagnosis and treatment of diabetes mellitus becoming more widespread the disease has become alarmingly commonplace. Concomitantly, problems in the management of such patients are increasingly frequent. One such problem is insulin-resistance.

The following case report represents our recent experience with this problem.

Report of Case

L.J., a 36-year-old Negro housewife, was found to be a diabetic in 1957. Her diabetes had been under reasonably good control with 20 units of NPH insulin. However, 2 weeks before her admission to Freedmen's Hospital she began to show progressively increasing glycosuria requiring an increase in the insulin dosage to 30 units. In spite of this the glycosuria persisted, and she developed epigastric fullness, anorexia, general malaise, and vomiting. She was admitted on August 8, 1965 in keto-acidosis.

There was no history of cough, fever, dysuria, alcoholic intake, allergies, emotional conflict or unusual stress. Her family history was significant in that 2 aunts, 1 maternal and the other paternal, were known to have diabetes mellitus. Her father died at the age of 53 of a "heart attack." She is gravida VII, Para 5, abortio 2. Two children had birth weights greater than 10 pounds, and a third was greater than 9 pounds.

Physical examination revealed a semicomatose, tachypneic patient with a blood pressure of 128/74, pulse rate of 128 per minute, and temperature of 98.8°F. She exhibited typical Kussmaul respirations at 40 per minute. Funduscopic examination revealed mild venous dilatation and tortuosity, mild A-V nicking, and 1 small, hard, white exudate in the left fundus. The thyroid was not enlarged. The chest was clear. The heart was not remarkable except for the tachycardia. There was mild left upper quadrant tenderness. The rest of the examination including the pelvic was unremarkable.

The significant laboratory data on admission were: blood sugar, 950 mg. per cent; CO_2, 18 volumes per cent; serum sodium, 125 mEq./l; serum potassium, 6.6 mEq./l; white blood cell count, 24,400; hematocrit, 46 per cent; serum acetone, 4+ in the first dilution, and urinalysis unremarkable except for marked acetonuria and glycosuria. The chest X-ray film and skull series were normal. The electrocardiogram was suggestive of hyperkalemia and tachycardia. The daily insulin requirement, blood sugar response, and steroid therapy are shown in figure 1.

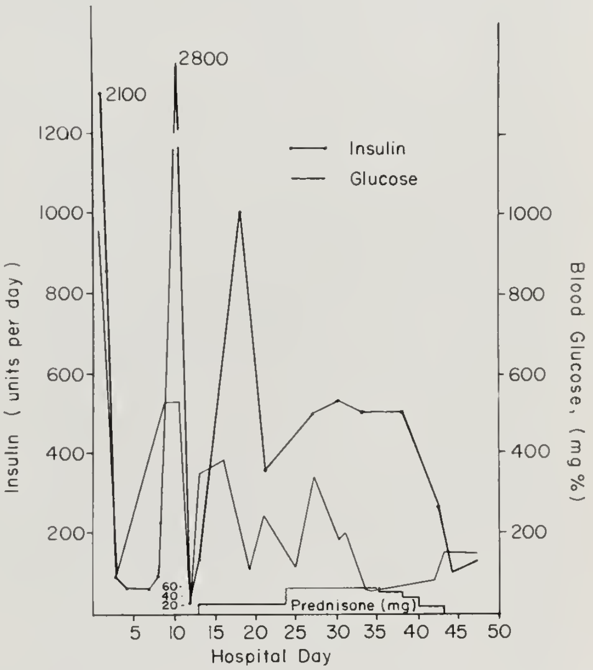


FIG. 1. Daily insulin dosage, blood glucose levels, and prednisone therapy.

Comment

The average case of keto-acidosis usually requires about 400 units of insulin for the restoration of homeostasis, with reversion to the pre-acidosis insulin ration. An occasional patient might need several times this dose, but once the acidosis is corrected, the momentary resistance, so to speak, is overcome. In this connection it has been shown that acidosis per se inhibits insulin action.[1] Shipp et al[2] found that 9 per cent of both their own Joslin Clinic cases and the cases they gathered from the literature between 1950 and 1961 developed abruptly with diabetic acidosis.

---

* Chief Resident, Department of Medicine, Freedmen's Hospital, Washington, D.C.

† Assistant Professor of Medicine, Howard University College of Medicine, Washington, D.C.

‡ Professor and Head, Department of Medicine, Howard University College of Medicine.

An attempt to maintain our patient on an insulin ration close to her pre-acidosis requirement promptly led to a second episode of ketoacidosis. This time 2,800 units of insulin was needed. It was clear that we were dealing with true insulin-resistance. We had reasonably good response to prednisone in conjunction with moderately large doses of depot insulin.

Discussion

Insulin resistance may be immunologic or nonimmunologic, or, put differently, hormonal or nonhormonal. Hormonal insulin-resistance is more correctly insulin antagonism, exemplified in some patients with thyrotoxicosis, Cushing's syndrome, and acromegaly, the antagonistic agents being respectively excessive thyroxine, cortisol, and somatotropin. There is no immunologic basis for insulin-resistance seen in such patients, and it is only rarely that insulin needs approximate 200 units per day. This is not as difficult a problem as immunologic or nonhormonal insulin-resistance.

Insulin-resistance was recognized in the early days of the use of the drug. Root[3] in 1929, extrapolating from animal experiments, defined it as the need for 200 units or more of insulin per day for greater than 2 days to achieve diabetic control. Smelo[4] in 1948 confirmed this definition and reviewed the problem. He pointed out, however, that diabetes is not a prerequisite but rather that prior insulin administration was the important thing. Yet, in 14 of the 54 cases he reviewed insulin hyporesponsiveness arose *de novo*, that is, without prior insulin injections.

There are many flaws in Root's definition. The most obvious is the common clinical situation in which the carefree patient, following no diet whatsoever, goes through a hectic period of progressive increases in insulin rations before equilibrium is established. The next problem is the so-called Somogyi effect,[5] a situation characterized by a vicious cycle of hypoglycemia-hyperglycemia, perpetuated in the unfortunate circumstance that the physician repeatedly sees the patient during the hyperglycemic phase and incorrectly increases the insulin dose.

A third flaw in this arbitrary definition is the observation that in man, following total pancreatectomy, a ration of approximately 40 units of insulin per day is adequate for satisfactory diabetic control.[6]

The definition of insulin-resistance that we prefer is that of Berson and Yalow.[7] These investigators have shown in very elegant studies that all human subjects treated with exogenous insulin within 2 to 3 months develop insulin-binding antibodies. This is readily understandable inasmuch as commercially available insulin is for the most part a mixture of porcine and bovine insulin. Quantitatively this binding amounts to 10 units of insulin per liter of plasma. On the other hand, insulin-resistant subjects bind greater than 20 units of insulin per liter of plasma. We think that this represents an infinitely finer definition of insulin-resistance.

Recognizing that there are very few laboratories currently capable of measuring insulin-binding antibodies, we can readily understand the hesitancy in the acceptance of immunologic definition. Until then, accuracy of diagnosis would be good if the clinician accepts the premise that the requirement for a large insulin ration does not in itself mean insulin-resistance. Lazarus and Volk[8] and others[9, 10] emphasize that the failure of insulin to produce a significant blood sugar-lowering effect is a better criterion. Indeed, Brayshaw and Petersdorf[9] recommend an insulin tolerance test early in the course of a refractory case of diabetic acidosis.

Field[11] added the concept of peripheral tissue unresponsiveness as a basis for insulin-resistance. This was illustrated in a patient with "transient diabetes" in whom adipose tissue was found to be less sensitive than adipose tissue from a normal person.[12]

Treatment

The handling of our patient exemplifies our view of the management of insulin-resistance. Before any claims are made for a particular regimen we must remember that Smelo[4] long ago pointed out that resistance wears itself out within 36 months; granted, he was speaking primarily about chronic insulin-resistance.

Patients with the acute syndrome of ketoacidosis and insulin-resistance are best treated by the administration of large quantities of regular insulin at frequent intervals. The concomitant correction of the usual fluid and electrolyte problems should not be neglected. The house staff need not be timid in giving the large amounts of insulin. Frequent checks on the blood sugar with the appropriate use of intravenous glucose in the fluids used would obviate any untoward effect. Once the patient is out of keto-acidosis the insulin-resistant state may remit, or it may persist. The latter event presents an interesting problem.

Recognizing the lesser degree of antigenicity of porcine insulin when compared to bovine insulin, one might attempt to handle the problem by giving porcine insulin instead of the usual bovine-porcine mixtures. Some degree of success can be anticipated from this maneuver. One may choose to do no more than to give as large doses as possible of depot insulin. In the long-term situation this may not be entirely satisfactory. The other choice is to administer corticosteroids. Our choice is prednisone in doses of 40–60 mg. initially. In general, one can expect some initial response in 3 to 4 days and a more favorable response in 10 to 14 days. Steroids are tapered as soon as a response is obvious and hopefully discontinued relatively soon. Remissions following corticosteroids are of variable duration.

It is not known what precipitates the insulin-resistant state. Infection might play a role. Allergic backgrounds have not been a constant feature in the insulin-resistant patient. Insulin-resistance, then, remains an enigma, but with early recognition and the observance of a few basic therapeutic principles the condition can be controlled to the satisfaction of both patient and physician.

References

1. Mackler, B., Lichtenstein, H., and Guest, G. M.: Amer. J. Physiol., 1951, **166**, 191.
2. Shipp, J. C., Cunningham, R. W., Russell, R. O., and Marble, A.: Medicine (Balt.), 1965, **44**, 165.
3. Root, H. F.: New Eng. J. Med., 1929, **201**, 201.
4. Smelo, L. S.: Proc. Amer. Diab. Ass., 1948, **8**, 77.
5. Somogyi, M.: Amer. J. Med., 1959, **26**, 169.
6. Ricketts, H. T., Brunschwig, A., and Knowlton, K.: Ibid., 1946, **1**, 229.
7. Berson, S. A., and Yalow, R. S.: J. Clin. Invest., 1959, **38**, 1996.
8. Lazarus, S. S., and Volk, B. W.: J. Lab. Clin. Med., 1952, **39**, 404.
9. Brayshaw, J. R., and Petersdorf, R. G.: Bull. Hopkins Hosp., 1960, **106**, 143.
10. Collens, W. S., and Banowitch, M. M.: Metabolism, 1955, **4**, 355.
11. Field, J. B.: Ibid., 1962, **11**, 636.
12. Field, J. B., Johnson, P., and Herring, B.: J. Clin. Invest., 1961, **40**, 1672.

Sickle-cell Anemia—Kagwa, Ferguson, Scott and Bullock

(Continued from page 4)

delayed; the marital status did not differ from the general population; no separations, divorces, or complaints of impotence or weakness in sexual relationship were noted; the most frequently encountered obstetrical problems were severe postpartum hemorrhage and thrombotic crises during this period; complications and associated diseases were not unusual; education of the majority of our patients was below college level; the observed physical status of patients was essentially that of asthenic habitus, particularly in the male, and a few patients sought to use their disease as an expression of dependency and as an escape from personal responsibility.

Although crises and complications continue to represent significant disabling features of this disease, our current observations indicate that the general outlook for survival and productive activity are steadily improving for these patients.

References

1. Smith, E. W., and Torbert, J. V.: Bull. Hopkins Hosp., 1958, **101**, 38.
2. Jelliffe, D. B.: Trans. Roy. Soc. Trop. Med. Hyg., 1952, **46**, 169.
3. Tomlinson, W. J.: Amer. J. Med. Sci., 1945, **209**, 722.
4. Henderson, A. B.: Amer. J. Med., 1950, **9**, 757.
5. McGavack, T. H., and Nussbaum, C. C.: Urol. & Cutan. Rev., 1942, **46**, 194.
6. Herrick, J. B.: Arch. Intern. Med., 1910, **6**, 517.
7. Leivy, F. E., and Schnabel, T. G.: Amer. J. Med. Sci., 1932, **183**, 381.
8. Bauer, J., and Fisher, L. J.: Arch. Surg., 1943, **47**, 553.
9. Carangello, J., and Otts, O. M., Jr.: Southern Med. J., 1947, **40**, 1016.
10. Fouche, B. S., and Switzer, P. K.: Amer. J. Obstet. Gynec., 1949, **54**, 108.
11. Killingsworth, W. P., and Wallace, S. A.: Southern Med. J., 1936, **29**, 941.
12. Hodges, J. H., and Bernstine, J. B.: Amer. J. Obstet. Gynec., 1947, **54**, 108.
13. Steinberg, B.: Arch. Path., 1930, **9**, 876.
14. Hughes, J. G., Diggs, L. W., and Gillespie, C. E.: J. Pediat., 1940, **17**, 116.
15. Patterson, R. H., Wilson, H., and Diggs, L. W.: Surgery, 1950, **28**, 393.
16. Sturgus, C. C.: Hematology. Springfield, Ill: Thomas, 1948.
17. Steinfield, E., and Klauder, J. V.: Med. Clin. N. Amer., 1927, **10**, 1561.
18. Diggs, L. W., and Chung, R. E.: Southern Med. J., 1934, **27**, 839.
19. Cummer, C. L., and LaRocco, C. G.: Arch. Dermat. & Syph., 1940, **42**, 1015.
20. Huck, J. G.: Bull. Hopkins Hosp., 1923, **34**, 335.

Virilizing Adrenal Tumors in Childhood

Report of a Case

CAROL M. RUSSELL, M.D.*, MELVIN E. JENKINS, M.D.†, AND DAVID M. FRENCH, M.D.‡

FUNCTIONAL ADRENAL CORTICAL TUMORS appear to be rare in children. In 1953 Sobel et al,[1] after reviewing the literature, documented approximately 30 instances of Cushing's syndrome and 55 cases of virilism due to adrenal tumor in children between the ages of 3 months and 10 years. By 1957 slightly more than 100 cases of adrenal cortical tumors in children under 10 years had been reported.[2] Since 1957 similar case reports have appeared from time to time.[3-8]

This communication describes an infant in whom the diagnosis of virilizing tumor was clinically evident before 1 year of age. Laboratory findings were consistent with the clinical impression of an adrenal tumor which was confirmed at surgery. The report will reëmphasize some of the differential diagnostic features between adrenal tumor and other diseases capable of producing progressive virilization in growing children.

Report of Case

This 10-month-old female infant was admitted for evaluation of a progressively enlarging clitoris, first noticed at 2 months of age. Pubic hair appeared at 5 months accompanied by deepening of the voice and increased muscularity. A few acneform lesions of the forehead and scant axillary hair became noticeable shortly thereafter. For some unexplained reason the mother failed to express concern about these virilizing signs until the infant reached 9 months of age, when professional help was first sought.

At birth the external genitalia had appeared normal. The mother had not received androgenic or progestational drugs during pregnancy. The family history was noncontributory. A female sibling, aged 8 years, was in excellent health.

The child appeared older than her chronologic age. She was quite muscular, particularly around the shoulders, upper arms and forelegs. Her cry was hoarse and deep. She had relatively abundant pubic hair, scant axillary hair, and coarse dark body hair, most marked on the legs. A few acneform lesions were distributed over the forehead (figure 1).

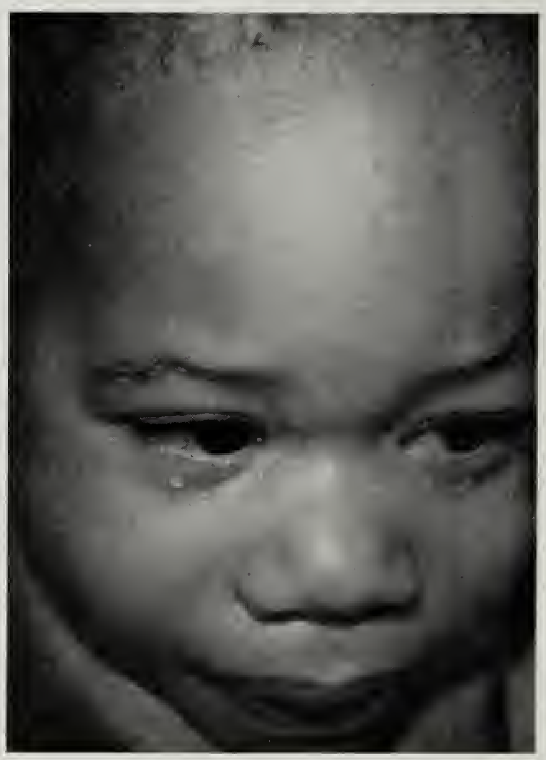


FIG. 1. Facies of the patient demonstrating acneform lesions of the forehead.

The clitoris measured 3.5 cm. in length. Significantly, no labioscrotal fusion was apparent; the vaginal and urethral orifices were normally separated (figure 2). On rectal examination a small pencil-sized uterus was palpated. No extrauterine masses were felt.

The general physical examination was otherwise essentially normal. The blood pressure was 100/70, the height 32 inches, and the weight 28½ lbs. Her lung fields were clear to auscultation and percussion. There were no cardiac murmurs. No abdominal masses were felt. The deep tendon reflexes were physiologic.

---

* Junior Assistant Resident in Pediatrics, Freedmen's Hospital, Washington, D.C.

† Associate Professor of Pediatrics, Howard University College of Medicine, Washington, D. C.; Pediatrician, Freedmen's Hospital.

‡ Associate Professor of Surgery, Howard University College of Medicine; Associate Surgeon, Freedmen's Hospital.

Laboratory findings included a normal hemogram and urinalysis. The serum sodium, potassium and chloride concentrations were normal. Likewise, blood chemical determinations, including urea nitrogen, glucose and total protein concentrations were normal. A buccal smear, stained with aceto-orcein, revealed 22 per cent chromatin positive cells.

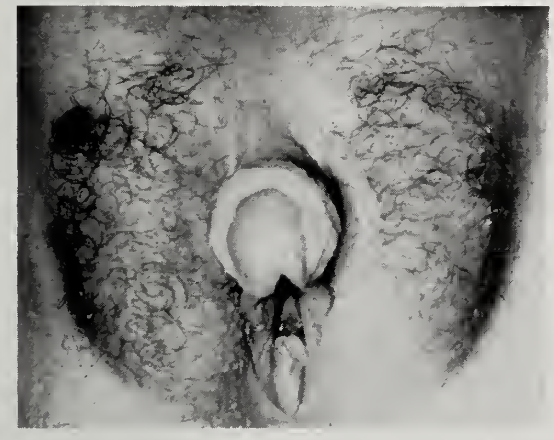


FIG. 2. Close-up of external genitalia demonstrating pubic hair and enlargement of the clitoris. Note the normally separated vaginal and urethral orifices.

Roentgenograms of the abdomen, chest and skull were normal. Bone age was advanced to 2 years. An intravenous pyelogram failed to reveal displacement of either renal shadow.

The 24-hour urinary content of 17-ketosteroids (17 KS) detected by the Zimmerman reaction ranged between 5.0 and 7.2 mg. Normal for this age is less than 1.0 mg. per 24 hours. The urinary 17 KS failed to decrease on the ninth and tenth consecutive days of intramuscular cortisone (25 mg. per day) during which time the 17 KS measured 7.4 and 8.5 mg. per 24 hours.

On the twentieth hospital day an exploratory laparotomy through a mid-line abdominal incision demonstrated a well demarcated tumor at the superior pole of the left adrenal gland measuring 6 by 8 cm. The tumor was removed without difficulty. It was well encapsulated and noninvasive (figure 3). Microscopically, there was extensive pleomorphism with many nucleoli; some clear cells were seen (figure 4).

Intramuscular cortisone (75 mg.) was administered on the day preceding and the day of surgery with a gradual tapering of the daily dosage thereafter. On the sixth postoperative day an evisceration at the site of the surgical wound occurred. Secondary closure was accomplished, but the postoperative course was stormy for the first 2 days and was further complicated by a concurrent aspiration pneumonia. The infant responded well to parenteral fluids, cortisone and antibiotics. Nineteen days after the removal of the tumor the 17 KS had decreased to 0.3 mg. per 24 hours. Over the 3 months since surgery the patient has progressed satisfactorily. There has been no evidence of tumor recurrence. The acne has regressed, the muscle mass has decreased, and the pubic hair is less abundant, but the voice, as expected, is unchanged.

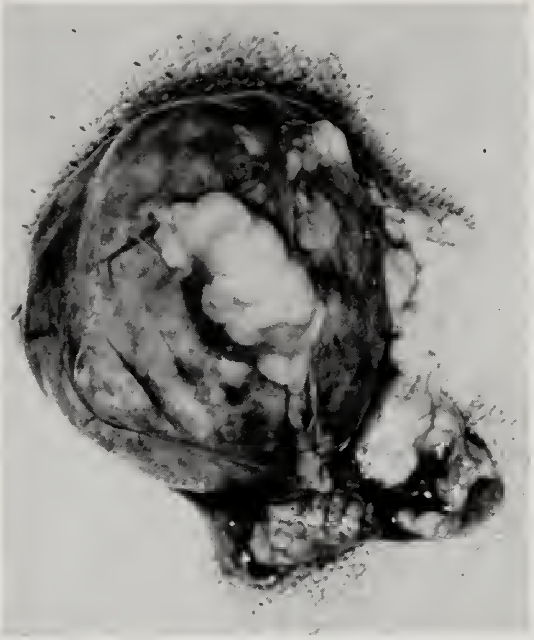


FIG. 3. Tumor measuring 6 by 6 by 8 cm. Note encapsulation and adrenal tissue below.

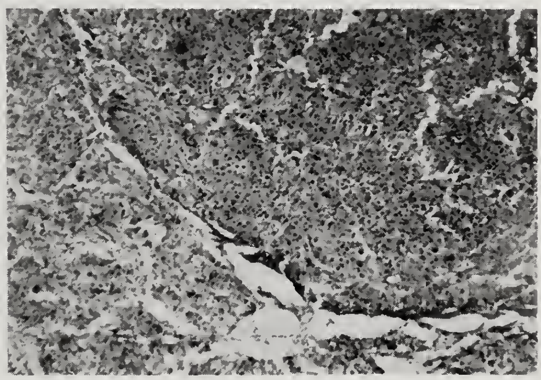


FIG. 4. Microscopic section of tumor tissue demonstrating nuclear pleomorphism and a few cells with clear cytoplasm.

Comment

The infant presented a clinical picture much more suggestive of adrenal tumor than congenital virilizing adrenal hyperplasia (VAH). The absence of genital ambiguity at birth and the normally separated urethral and vaginal orifices without labioscrotal fusion argues against the possibility of VAH. On the other hand, a small percentage of females with VAH have essentially normal external genitalia at birth. In these girls, however, rapid virilization ordinarily does not occur so early. Pubic hair usually first appears after 1 year of age in VAH.[9] Postnatal virilizing adrenal hyperplasia due to enzymatic defects has been reported in both children and adults, but characteristically in children of somewhat older age.[9]

The 24-hour urine content of 17 KS was not greatly elevated. Normally an infant excretes less than 1.0 mg. 17 KS per 24 hours, contrasted to 5.0–7.2 mg. per 24 hours in this patient. Often with virilizing adrenal tumors the urinary 17 KS measure several hundred mg. per 24 hours.[1, 8, 9] More important in this case was the failure of the urinary 17 KS to decrease after high doses of cortisone. This observation was strongly suggestive of a neoplasm. The ovary as the site of androgen secretion in this patient was unlikely. Ovarian virilizing tumors are extremely rare in childhood and may become palpable by the time clinical abnormalities are evident.

Dexamethasone is the preferred steroid for ACTH suppression because of its high biologic potency. This steroid is at least 30 times more potent than cortisone. It follows, therefore, that a much smaller quantity of urinary metabolites from the exogenous compound appear after the use of dexamethasone. This fact is particularly important with urinary 17-hydroxycorticosteroids (17 OHCS) where approximately one-third of administered cortisone is excreted as 17 OHCS. Since very little glucocorticoid is excreted as urinary 17 KS, 17 KS suppression can be satisfactorily interpreted after cortisone administration.

The urinary excretion of dehydroepiandrosterone was not evaluated in this child. A selective deficiency of $\Delta 5$, 3B-hydroxysteroid dehydrogenase has been demonstrated in neoplastic adrenal cortical tissues in association with the urinary excretion of abnormally high levels of $\Delta 5$, 3B-hydrosteroids.[8, 10, 11]

Preoperative Hormone Therapy

Cortisone was administered intramuscularly in dosages of 75 mg. on the day prior to and the day of adrenalectomy. Gradual tapering of the dosage was interrupted on the sixth day when an evisceration necessitated secondary closure of the wound. Cortisone (25 mg. daily) was continued during the acute phase of the associated aspiration pneumonia. The dosage was rapidly decreased following the infection and discontinued on the tenth day. No evidence of adrenal insufficiency has been detected in the 3 months since cortisone was discontinued. The infant tolerated an acute viral infection 6 weeks after surgery without supportive cortisone.

Relatively large dosages of cortisone were given to cover the stresses of the 2 surgical procedures and the complicating infection. While the androgens produced by a virilizing adrenal tumor cannot suppress ACTH synthesis or release, some cortical tumors contain mixed elements and may secrete both glucocorticoids and androgens.[11, 12, 13] Glucocorticoids are potent inhibitors of ACTH. Under these circumstances the degree of ACTH and contralateral adrenal cortisol suppression depend on the relative activity of glucocorticoid synthesis by the tumor. A larger cortisol production causes a more complete suppression of the contralateral adrenal cortex. In the infant reported, complete suppression of endogenous urinary 17 OHCS occurred during cortisone administration, indicating insignificant autonomously secreted glucocorticoid by the tumor. It therefore seems probable that the contralateral adrenal cortex, as well as the uninvolved left cortex, were under pituitary feedback control of glucocorticoid production and not significantly atrophied.

A second consideration involves the question of the degree of damage to the functional adrenal tissue at the tumor site. If a significant amount of functional cortex remains, compensatory hyperplasia of the contralateral gland would not be anticipated. Therefore, unilateral adrenalectomy might produce a temporary relative insufficiency of cortisol production with 1 gland suddenly taking over the function of 2. Stressful situations could aggravate this tendency. Of added concern was the diagnostic suppression of glucocorticoid secretion shortly before surgery which could have temporarily compromised the adrenal response to subsequent stress.

In general, exogenous glucocorticoid in hyperphysiologic doses is indicated before and during surgery for virilizing adrenal tumors. Certainly steroid support is even more mandatory in glucocorticoid tumors producing Cushing's syndrome in which nearly complete suppression of ACTH and atrophy of the contralateral adrenal cortex can be presumed. A much more gradual withdrawal of exogenous glucocorticoids is indicated after unilateral adrenalectomy for cortisol-producing adrenal tumors.

Surgical Considerations

Since diagnostic studies failed to localize the tumor, an abdominal rather than a posterior retroperitoneal approach was used in this patient. An abdominal approach permits evaluation of both adrenals and the retroperitoneal region. Moreover, the transabdominal approach is technically much easier in the child than in the adult, who is often more obese.

After opening the abdomen palpation reveals the site of the lesion. If the tumor is on the left, 2 choices are presented. One may either incise the posterior peritoneum over the superior pole of the kidney and the palpable mass or free the splenic flexure of the colon from its diaphragmatic attachments and reflect it medially and downward along with the posterior peritoneum and colonic mesenteric vessels as was done in this case. Since the left adrenal is high, one of us (D.M.F.) prefers the latter approach, which exposes a wide area of the posterior body wall and enough area to the right of the great vessels to allow visual, as well as palpable, evaluation of the right adrenal gland. If the tumor is located on the right, the right retroperitoneal area is exposed beginning with mobilization of the hepatic flexure of the colon. This exposure allows excellent visualization of the adrenal vasculature so that canalization of adrenal veins for blood sampling becomes quite simple.

Wound healing is usually satisfactory following removal of virilizing adrenal tumors. This observation is possibly based on the protein anabolic influence of androgens.[9] The cause of the wound disruption in our patient cannot be explained with certainty. It is possible that suppressive cortisone therapy was responsible for this complication. Pharmacologic doses of cortisone interfere with wound healing in animals.[14] However, the frequency of wound disruptions in children treated preoperatively with glucocorticoids is uncertain. It is possible that a combination of circumstances including early abdominal distention following surgery contributed to the wound disruption in this patient. In patients receiving exogenous glucocorticoids abdominal surgical wounds probably should be closed with deep retention sutures.

A clitoridectomy will possibly be performed at a later date. However, since the clitoris will now remain essentially at its present size, the relative size may decrease with somatic growth to the point that its surgical removal will no longer be indicated in later childhood.

Long-term Follow-up

Virilizing signs may decrease rather slowly following removal of androgenic stimulation in children. Pubic hair often begins to decrease in 2 to 3 months but may persist until normal pubescent changes occur at adolescence.[9] Clitoral enlargement remains but does not progress. The deep voice is due to permanent changes in the larynx and vocal cords and therefore is irreversible.[9] However, many of these girls learn to modulate their voices well.

It is mandatory that the infant herein reported be followed closely for evidence of tumor recurrence. Adrenal tumors are more frequently malignant in small infants than in older children and adults.[2, 9, 15] According to Hardy and McPhail,[15] any patient with virilizing tumor of the adrenal cortex is likely to have a poor prognosis. It is probable that our patient has a good prognosis despite the obvious nuclear and cytoplasmic atypicality of the tumor. Grossly the tumor was well encapsulated with no evidence of local invasion. Microscopically, there were only rare mitoses but some patchy necrosis. No distant metastases were found with a tumor known to have been functionally active for at least 8 months. Admittedly, it will take the test of time to give us the answer to the ultimate prognosis in this case.

Summary

A 10-month-old female infant with virilizing adrenal tumor has been described. The clinical features of postnatal virilization and elevated urinary 17-ketosteroids, not suppressed by exogenous cortisone, led to the diagnosis which was confirmed at exploratory laparotomy.

Differential diagnostic features and surgical considerations have been discussed. Only long-term follow-up can establish the benignity or malignancy of the tumor in this child.

Dr. Ozella T. Webb referred the patient for study. Drs. Marvin A. Jackson and Richard B. Cohen examined the microscopic sections.

References

1. Sobel, E. H., Lee, C. M., Jr., Esselborn, V. M., and Clark, L. C., Jr.: Amer. J. Dis. Child., 1953, **86**, 733.
2. Scarpa-Smith, C., Thornton, N., Caffery, E. L., and Greenblatt, R. B.: Ibid., 1959, **97**, 78.
3. Greenblatt, R. B., Martinez, M. I., Zimmerman, A. M., and Lucas, W. T.: Ibid., 1957, **94**, 691.

(*Continued on page 62*)

Flagyl destroys trichomonads

here & here & here & here

No topical treatment can

Flagyl®

brand of
metronidazole

Flagyl eliminates the difficulties and frustrations that have long attended the treatment of trichomonal infection.

These difficulties arose mainly from:

1) the failure of any previously known agent to destroy the protozoan in paravaginal crypts and glands;

2) the failure of any previously known agent to prevent reinfection by eradicating the disease in male consorts.

The introduction of Flagyl removed both of these long-standing deficiencies. Hundreds of published investigations in thousands of patients have confirmed the ability of Flagyl to cure trichomoniasis.

Correctly used, with due attention to repeat courses of treatment for resistant, deep-seated invasion and to the presumption of reinfection from male consorts, Flagyl has repeatedly produced a cure rate of up to 100 per cent in large series of patients.

Nothing cures trichomoniasis like Flagyl.

Dosage and Administration

In *women:* one 250-mg. oral tablet t.i.d. for ten days. A vaginal insert of 500 mg. is available for local therapy when desired. When the inserts are used one vaginal insert should be placed high in the vaginal vault each day for ten days, and concurrently two oral tablets should be taken daily.

In *men:* in whom trichomonads have been demonstrated, one 250-mg. oral tablet b.i.d. for ten days.

Contraindications

Pregnancy; disease of the central nervous system; evidence or history of blood dyscrasia.

Precautions and Side Effects

Complete blood cell counts should be made before and after therapy, especially if a second course is necessary.

Infrequent and minor side effects include: nausea, unpleasant taste, furry tongue, headache, darkened urine, diarrhea, dizziness, dryness of mouth or vagina, skin rash, dysuria, depression, insomnia, edema. Elimination of trichomonads may aggravate moniliasis.

Dosage Forms

Oral–250-mg.tablets/Vaginal–500-mg.inserts

SEARLE

Research in the Service of Medicine

PRESIDENT'S PAGE

THE DOCTOR AND HIS MEDICAL SOCIETY

As the title implies, every physician who is a member of the Medical Society of the District of Columbia owns a piece of it. And his piece is no larger or smaller than that of any other member. In the same vein, each of us has an aliquot share of responsibility in running the Society. If it appears that a small group plays a disproportionately large role in the conduct of the Medical Society, let me assure you that they do not represent a clique. On the contrary, it is a fact that relatively few have stepped forward to indicate a willingness to assume some degree of responsibility.

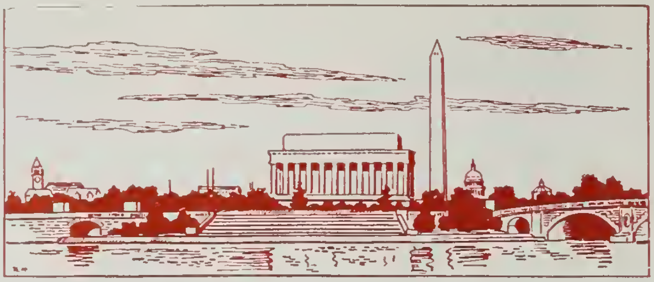
In this first month of my Presidency I am hopeful that I can bring about a broader membership participation in the Society's affairs. All of us belong to other societies representing a specialized or a group interest, but the Medical Society of the District of Columbia is the only one in which membership permits us to call every other physician in our community "fellow-member." Furthermore, in these days of critical change in the socioeconomic aspects of medical practice, our Society is the only one that can effectively speak out in an effort to favorably mold and guide these changes. However, the strength of the Society's voice is only as great as its members' participation. It is my sincere plea that no segment of our membership isolate itself from our Medical Society's problems; the practitioner, the researcher, the teacher and the specialist—each has the same stake in the future of medicine. If a particular group believes that the Society does not truly represent its interests, let such a group aggressively participate and thereby modify the Society's policy.

Some weeks ago I sent to each member an invitation to participate in committee work of the Society. Not only have the majority of those who already have committee assignments volunteered for further participation, but a large number of members have for the first time stated interest in working on one or more of our many committees. The response has been gratifying and clearly indicates a broad base of interest.

Finally, I should like to broaden this invitation to each member to participate in every activity of our Society.

ROBERT JAMES COFFEY, M.D.

President, The Medical Society of the District of Columbia, 1966



EDITORIALS

Robert James Coffey, M.D.

THE 99th PRESIDENT of the Medical Society of the District of Columbia, Dr. Robert J. Coffey, assumed his new office, January 1, 1966. Since 1947 Dr. Coffey has been Professor of Surgery and Director of the Department of Surgery at Georgetown University School of Medicine.

Dr. Coffey is a native of New York, born in Elmira, November 14, 1908. He attended primary and secondary schools in Elmira, enrolled at St. Bonaventure College at St. Bonaventure, New York, and graduated with the degree, Bachelor of Science, in 1928. He received his medical degree from Georgetown University in 1932, and returned to Elmira for internship and a year as resident in surgery at St. Joseph's Hospital.

Dr. Coffey continued his studies at the Mayo Clinic in Rochester, Minnesota, earning the degree, Master of Science in Medicine from the University of Minnesota in 1937. He completed a fellowship in surgery at the Mayo Clinic, was appointed first assistant in general surgery, and was granted the degree, Doctor of Philosophy in Surgery in 1938.

Following his training in surgery, Dr. Coffey entered the private practice of general surgery in Washington and joined the staff of Georgetown University as Professor of Experimental Surgery. His practice was interrupted by World War II. He was commissioned Lieutenant in the Medical Corps of the United States Navy in October, 1942, and served until January, 1946, returning to Washington with the commission of Lt. Commander. During his years in service he was surgeon on the *U.S.S. Iowa*.

After the War Dr. Coffey returned to Georgetown as Professor of Surgery and Director of the Department of Surgery. He is Chief of Surgery of the Georgetown Division at D. C. General Hospital and consultant in surgery to the U.S. Naval Hospital, the Andrews Air Force Base Hospital, and the Veterans Administration Hospital.

He is President of the Southeastern Surgical Congress, a licentiate of the American Board of Surgery, and Editor-in-chief of *Surgical Digest*. A Fellow of the American College of Surgeons, he is now serving his third term as Governor of the College for the District of Columbia, and represents the College on the Conference Committee for Graduate Training in Surgery. He has been an Active member of the Medical Society of the District of Columbia since 1939. He is a member of the American Surgical Society, the Southern Surgical Association, the Surgeons Travel Club, the International Society of Surgery, and the Association of Military Surgeons of the United States. His fraternity is Sigma Xi. He has contributed many articles on surgical subjects to the literature.

In 1939 he was married to Mary Catherine Mundell, whose father, the late Dr. Joseph J. Mundell, was a long-time member of the D. C. Medical Society. They have 5 children, Maureen, Robert J., Jr., Christine, Anne and Joseph, all living at their home at 4936 Loughboro Road, N. W., in Spring Valley.

In spite of his many professional duties, he finds time for his family and for some golf at the Chevy Chase Club.

Dr. Coffey's aim is to promote a closer liaison between the Medical Society and the medical schools. As both an eminent surgeon and educator, the 99th President appears to have chosen a goal for which he is exceedingly well fitted.

The Public School System and Its Health Services

"The more important problems to be solved are no longer defects that are obviously physical; in fact, they involve the mind as much or more than the body. We now try to understand problems of learning, behavior, sensory functioning, emotional reactions, social, familial, and cultural aspects of the child's development."[1]

This concept, expressed by Dr. Mitchell, is an outgrowth of progressive steps in evaluation of the attributes of children introduced to formal learning processes in the public schools. Prior to introduction to the school, children have been exposed to many degrees of learning experience, from those found in the milieu of intelligent, middle-class families, to those in an environment of low cultural-economic status. From both areas come the physically handicapped, the brain-damaged, the mentally retarded, and children with emotional instability. In addition, from the deprived areas come children with a lack of communicable language and asocial behavior, such as defiance and a sense of inferiority. These and many other problems confront our public schools on first admission of children, and during the early grades, hopefully to be corrected before their entry to the secondary schools. Prevention of the development of behavior problems in otherwise "normal" children is an added responsibility of the educational system.

Education and health constitute the basic foundation on which rests the development of religion, morality, economics, cultural attainment, and social adjustment. Brick without mortar soon topples; a homogenized mixture of concrete is better. Health and education are such ingredients, each dependent on the other.

School health services have come a long way in quantity and quality. Perhaps quantity has forged ahead while quality needs a boost.

Medicine has not carried its proper share in the development of programs of mental health in their broadest implications. This is understandable in that the schism between physical and mental health has only in recent years been breached for mutual benefit. Both the general practitioner and the pediatrician, who have most contact with school children, can contribute to the total evaluation of school children. This adequate evaluation depends on specific individual examinations in an educational setting. We have learned to accept the economic, social and cultural backgrounds, as well as pure organic defects, as factors in complete adjustment to the learning process. The medical profession is peculiarly fitted to evaluate physiologic and "social" deficiencies which have to do with poor school adjustment and slow learning. Collaboration of physicians with teachers, psychologists, social workers, nurses, etc., is essential to efficiency.

The school problems in all large cities of the United States, with their rapid increase in school population, mainly of deprived parentage, are of the greatest moment. Crowded conditions dilute attention and teaching efficiency. The children are faced with family, school and urban adjustment, and many other factors of a frustrating nature. They require the most concentrated and coördinated programs possible to facilitate adjustment to their new status. As "captives" of the schools they are dependent upon the school system to coördinate and furnish such programs.

The physicians involved in school health services are oriented to private practice and indoctrinated into public health philosophies, but they have not heretofore always had sufficient contact with educators to render the services of which they are capable. They have the ability to evaluate not only organic but physiologic and mental aberrations. These are closely related to the learning processes and behavioral attitudes. This knowledge is based on individual evaluations. Public health programs are related to mass immunizations, sanitary measures, control of communicable diseases, and treatment facilities for the indigent. Individualization is not a part of this "public health concept." Further, the responsibility of the Public Health Department is to the District Commissioners and not to the School System. It appears that a more comprehensive, efficient and farsighted "school health services" program should be developed under and as a part of the educational system. Health and education are inseparable; they are completely interdependent—"a healthy mind in a healthy body."

Such a program would necessitate the appointment of a Medical Director and the transfer of school physicians, psychologists, nurses, social workers, and other related personnel to the school administration and Board of Education. The Medical Director would be able to orient his personnel to the needs of educational programs, advising on health education, family living, and recreation in a meaningful way. He would contribute to teacher conferences related to the evaluation of the individual child and his needs. He and his staff would constitute the "brick" or "mortar" necessary to build a solid foundation for mature adulthood.

---

[1] Mitchell, H. H.: Pediatrics, 1965, 35, 1011.

Preston A. McLendon, M.D.

Are You Ready, Doctor?

Are you ready, doctor, for the steadily increasing number of women who want the "Pap" smear as part of their regular check-ups?

Although the educational program of the American Cancer Society has succeeded in alerting women to the vital importance of the "Pap" smear, it is the physician who plays the key role. In a recent survey of women who had had the test it was revealed that 76 per cent had had it because it was recommended by a physician and 12 per cent as part of a regular physical examination. Thus, a total of 88 per cent had had it because of physicians' actions.

Uterine cervical cancer, once a most dreaded form of disease, could be dramatically arrested as a cause of death if every adult woman would have a "Pap" test as part of the annual health check-up.

Although the disease can now be detected before symptoms appear and at a time when it is most curable, in 1965 some 12,000 women will have died of endometrial cancer. About 44,000 new cases of uterine cancer will be diagnosed this year.

The "Pap" smear is based on the study of cast-off cells which are shed normally by living tissue. In a check-up a physician can take a uterine sampling simply, quickly, and without pain. The acceptance of the "Pap" habit by women and their physicians is encouraging. The rate of progress is shown in these findings from a study recently completed by the Gallup Organization in the United States: In 1961, 30 out of every 100 women reported that they had had the "Pap" test at least once; by 1963, 48 out of 100 said they had had it once. In 1963, 77 of every 100 women reported that they had heard of the test; in 1961 this figure was 59.

The American Cancer Society is ready to help save lives by reaching American women where they live, where they work, where they meet, and persuading them to consult their physicians at a time when uterine cancers are curable—at the early recognition of a danger signal or by the annual health check-up. This leads to early diagnosis, early treatment, and more cures. Many authorities estimate that most deaths from this disease could be eliminated if these examinations were routinely performed.

The Metropolitan Area Uterine Cancer Project Committee of the American Cancer Society conducted a campaign of professional education which ran through 1965 and is now starting an extensive public education campaign to run through June. The Committee is hopeful that the campaigns will at least double the number of "Pap" tests for 1966.

If you wish further information on this subject, contact the D. C. Division of the American Cancer Society.

Stafford W. Hawken, M.D.
Chairman, Committee on Cancer Study

Since you doctors are the key to opening the door to detection, diagnosis, and ultimate cure of uterine cancer, I wholeheartedly endorse this program and urge each of you to continue to promote the "Pap" smear to every female patient.

Robert J. Coffey, M.D.
President, The Medical Society of the District of Columbia

D. C. Political Action Committee

DOCPAC, the District of Columbia Political Action Committee, is an offshoot of AMPAC, the AMA Political Action Committee. The District of Columbia was the last area where a PAC Group had not been formed by doctors.

The purpose of DOCPAC is to promote good government in the District of Columbia and to help elect on a national level legislators who favor good medical and paramedical legislation.

The founders of DOCPAC and members of the present Board of Directors are Drs. Darrell C. Crain, Robert J. Coffey, Oscar B. Hunter, Jr., Edward W. Nicklas, Lawrence A. Rapee, Paul R. Wilner, and Mrs. Elizabeth F. Tegge, along with the officers, Dr. William H. Cooper, Chairman, Mrs. Ann S. Rapee, Vice Chairman, Dr. Robert S. Poole, Secretary, and Dr. Richard T. Sullivan, Treasurer.

DOCPAC is nonpartisan. It will support members of either major political party but will always put the welfare of our country first. DOCPAC hopes to be a politically potent force in the District of Columbia. This will be especially true if Home Rule comes to be. I am sure that no physician desires to see the Health Department, or the District of Columbia General Hospital, or the health policies of our city become a "political football." We physicians can help with the mechanism of our government from the local to the national level by joining DOCPAC. Your Board of Directors is always anxious to receive advice and assistance from any colleague.

William H. Cooper, M.D.
Chairman

Health Dept. Notes

Birth Certificates—Accurate and Complete

Physicians, perhaps more than most other persons, know how important are patient records and histories; and foremost among such records are certificates of delivery and birth.

These records are filed permanently in the Vital Records Unit of the District of Columbia Department of Public Health. But they have their origins in the delivery rooms, on the obstetric floors, and in the medical record libraries of our hospitals.

Physicians and hospitals therefore play a vital role in the preparation and filing of birth certificates. They can also be instrumental in encouraging the parents of newborn babies to complete the information needed when such certificates are forwarded.

The original certificate is completed at the hospital where the birth occurs, using information usually supplied by the mother. These forms are forwarded by the hospital to the Health Department within a few days or a week of the baby's birth. It is likely that the mother and baby may still be in the hospital.

It might therefore be possible for the hospital staff, nurses and physicians to do whatever is reasonable to ensure that the parents are aware of the importance of the birth certificate and particularly of the need for complete information.

If these parents have not decided upon the baby's name or if other information has been withheld, an incomplete record will probably be filed; and the chances are good that this deficiency may be continued for several years, until the parents have reason to request a copy of their child's certificate.

They may then discover that their youngster has, in effect, been without a legal name since birth because there is no entry on the certificate. Or they may find that other required personal data have not been completed.

The occasion for this discovery is often when the child is ready to enter school. A valid birth certificate must be presented at that time, and such validity includes completed information.

Parents do have an early second chance to correct errors of fact or omission in the baby's certificate. This comes several weeks after the birth, when a copy of the certificate is sent to the home address by the Vital Records Unit. Changes may then be made and returned to the Health Department. But, nonetheless, a great many errors are allowed to stand by parents.

A birth certificate is a most important legal document. It is needed by everyone and at many times during their lives.

A certificate is often required to obtain employment; to receive certain Government benefits, including welfare aid for widows and dependent children; to enter military service or Government civil service; to vote; to inherit property; to travel abroad with a passport; to hold public office; and for numerous other reasons.

We estimate that there are some 10,000 residents of Washington whose birth certificates, as filed, are incorrect or incomplete. Few of these persons are aware of this until they have reason to need the certificate. This is often an urgent situation, and the delay which occurs while records are searched and corrected is likely to be inconvenient for that person. Yet there is no way for us to initiate correction until the individual requests his certificate.

It would be a service to parents of newborn babies if physicians, nurses and hospital staff could stress the value and importance of this first legal document for the child.

The Department of Public Health is grateful to the medical and hospital professions for the cooperation which it has received in this matter in the past. The Department welcomes such continued interest and assistance to aid parents and their children in the District of Columbia.

MURRAY GRANT, M.D., D.P.H.
D. C. Director of Public Health

1965 Community Health Week

IN ITS FIRST REPORT on sponsorship of Community Health Week, November 6–13, the Medical Society of the District of Columbia received the enthusiastic coöperation of its Speakers Bureau, allied health groups, drug and pharmaceutical companies, and the news media.

During that week physicians appeared on 10 radio shows and 5 television programs (1 TV show was taped and broadcast twice). They were interviewed and spoke on such diverse subjects as VD, pediatrics, new advances in heart research, community health problems in general, the effects of Medicare, and "How Doctors Can Help Teen Agers."

In addition to the radio and TV interviews, short 20-second messages were distributed to all stations, which used them during the week's observance in their public service slots.

Drug companies and dairies used Community Health Week messages in their copy both on the air and in the newspaper ads.

There were a half dozen news stories appearing in area dailies and weekly newspapers. These were also carried on radio and television news programs.

Over 600 posters designed by the Medical Society were distributed for use in D. C. Transit buses and on school and hospital bulletin boards.

Members of the Speakers Bureau spoke at 7 civic or business groups during Community Health Week and a number of talks were made after the Week's observance.

The Chesapeake & Potomac Telephone Company's publication *The Call*, which was mailed to 200,000 phone subscribers, carried a reproduction of the C.H.W. slogan.

Six Metropolitan Washington Area hospitals held "Open House" observances during C.H.W.

The Metropolitan Washington Board of Trade used a C.H.W. postage meter slug for a 2-week period during which thousands of pieces of mail were sent out.

We hope to do better next year!

LOU BROTT
Public Relations Counsel

Planned and operated by Physicians—OPEN STAFF policy

Magnolia Gardens Nursing Home

Serving the Greater Washington Area

Specializing in long-term or acutely ill cases, also care during working hours, limited stays for vacation periods. Administered by Registered Nurse, 24-hour professional nursing service. Dietician-controlled meals, physio- and occupational therapy programs.

Your patient is assured medical supervision at all times. In an emergency doctors are on call to carry out your instructions until you personally can attend your patient.

Constructed 1964; completely fireproof; safety features. Gracious living, with attractive lounges, sundecks, chapel, cheery diningroom, homelike bedrooms. Outside gardens and patios for your patients' pleasure.

Illustrated brochure sent on request

9104 Good Luck Road—Lanham, Maryland
Capital Beltway—Exit #30 East-Route 450 PHONE 552-2000
Take next immediate left at Princess Garden Parkway 1 mile to Nursing Home

KIWANIS
CLUB
KIWANIS INTERNATIONAL
4

COMMU ALTH WEEK
Novem th - 13th
7

YOUR HEALTH HABITS!
COMMUNITY HEALTH WEEK
November 7th - 13th
Time to CHECK
YOUR HEALTH HABITS!
COMMUNITY HEALTH WEEK
November 7th - 13th
9

SOME WELL KNOWN TV AND RADIO PERSONALITIES are shown above along with others who contributed to the success of the D. C. Medical Society's observance of Community Health Week, November 6–13.

Top row: (1) WMAL-TV Barbara Coleman interviews Dr. John A. Kenney on VD during her World Women's Program; (2) Dr. Warren D. Brill (right), Chairman of Public Information and Education for the Medical Society, stops by WMAL radio and talks about community health problems with Johnny Wilcox; (3) Bill Johnson (left), newsman for WUST, with Dr. Jean Harris and Dr. Harold M. Hobart whom he interviewed during his half-hour program.

Center: (4) Dr. Darrell C. Crain (right), a member of the Medical Society's Speakers Bureau, receives a Certificate of Appreciation from Maelane Norcross, President of the Kiwanis Club of Georgetown, following Dr. Crain's talk on "The Effects of Medicare"; (5) Dr. Robert J. Coffey, President-elect of the Medical Society, in the spotlight, being interviewed on the City Side WTOP-TV program by (left) Julian Barber, Program Coördinator, and (right) Bill Zimmerman, newsman; Dr. Murray Grant, D. C. Director of Public Health, is between Mr. Barber and Dr. Coffey; (6) Dr. Marvin C. Korengold (right) interviewed on the very popular Harden and Weaver morning program over WMAL Radio (Frank Harden left, Jackson Weaver center).

Third row: (7) Dr. Josephine E. Renshaw (left), speaker at the Zonta Club of Washington on "The Effects of Executive Duties on the Health of Women," discusses with its President, Mrs. Ursula Keller, the Society's poster distributed during the Week; (8) Betty Groebli of WRC Radio interviews Dr. Reginald G. James on the subject of VD; (9) Community Health Week posters ride in 600 buses during the first 3 weeks of November. Bus driver Robert George shows one to his passenger, Mrs. Joseph Durkin.

UNIVERSITY
MEDICAL BUILDING

2143 K STREET, N.W.
OCCUPANCY FALL 1966

ADJACENT TO GEORGE WASHINGTON UNIVERSITY HOSPITAL
SEVERAL CHOICE SUITES AVAILABLE IN WASHINGTON'S NEWEST MEDICAL BUILDING
CUSTOM DESIGNED FOR YOUR REQUIREMENTS

SHANNON · & · LUCHS
Realtors Since 1906

900 SEVENTEENTH STREET, N.W.

CALL MR. MORRISON
296-2345

Report of the Chairman of the Executive Board*

The Executive Board has held 12 meetings since the 1964 Annual Business Meeting. To make the Board's task less time-consuming we have changed to a dinner meeting in the Society's library-lounge. This change has permitted a 10:00 p.m. adjournment rather than the 11:30 p.m. hour customary in past years. Four years on the Board has also changed any opinions I may have had of a clique running this Society. Believe me or not, as you please, each member of the Board thinks and votes for what he believes is in the best interest of all members.

Since the Executive Board minutes are published in summary form in the Medical Annals, this report will be concerned with but some of the key activities.

The Society's Committees and Sections held over 125 meetings in the headquarters building during the first 10 months of 1965, with some 20 more scheduled before the end of the year.

Committee Structure

After 2 years of study the committee structure was altered to permit greater flexibility and to improve communications with the Board. Seven Councils were created as Standing Committees, specified in the Constitution and By-laws. These are:

1. Council on Organization and Membership
2. Council on Communications and Public Service
3. Council on Ethics and Professional Relations
4. Council on Professional Education and Hospital Relations
5. Council on Community Health Programs
6. Council on Medical Care and Economics
7. Council on Specialty Sections

A member of the Executive Board is assigned as liaison to each Council to improve communications between the Board and Committees.

All but 4 of the former committees were deleted from the By-laws so that their number and types may be altered as the need arises. All committees are assigned to one of the 7 Councils. The 4 committees as Standing Committees remaining in the By-laws are:

Committee on Constitution and By-laws
Classification Committee
Grievance Committee
Committee on Medical Ethics and Professional Conduct

Committees created during the year include: Speakers' Bureau, Hospital Utilization, Communicable Diseases, Environmental Health, Public Health Department Liaison, Liaison with UPO, Liaison with the Department of Motor Vehicles, and Membership. In some instances previous committees combined; a few were abolished. We are still not satisfied with the committee structure and will continue revisions designed to make the Society's activities more effective. Every committee called upon to meet during the year has responded wholeheartedly, with excellent attendance by individual members. As noted earlier in this report, the following by no means represents the activities of the committees, but is intended only to call attention to selected subjects.

The House and Building Fund Committee

Probably the most difficult assignment during the year rested with this Committee and the Chairman, Dr. Frank S. Pelligrini. Having decided to sell the present property and having selected a site for a new Society headquarters, much of last year was spent in the halls of the District Building seeking approval for our building plans. With this completed, bids were mailed in December 1964 and returned January 28, 1965.

This Committee met with the Executive Board in January and the contract was awarded to Skinker and Garrett for $777,000, with the completion date set for December 15, 1965.

During the spring and summer subcommittees met to decide upon the many details of the structure furnishings, and financing. Representatives of the Woman's Auxiliary participated in many of these meetings to lend a feminine viewpoint where indicated.

At the writing of this report the new headquarters at 2007 Eye Street, N. W., is well under way. As is customary in this city, this completion date will probably not be met, but we continue to expect the office portion to be completed so that the Medical Bureau and staff can be moved on schedule. It is to be a 5-story building, with the Society to occupy immediately the first 2 floors and half of the third floor; the remainder of the third floor and the fourth floor are for future expansion. For the present this space will be leased to the D. C. Division of the American

---

* Presented at the Annual Business Meeting of the Medical Society of the District of Columbia, November 21, 1965.

Cancer Society, the Washington Heart Association, the Gorgas Society, and the Metropolitan Washington Blood Banks. Two floors of parking below ground should accommodate space for members attending all committee meetings and for some Section meetings.

I know there have been and still are questions in the minds of some members concerning the location selected and the decision to limit the size of the building to the Society's estimated future needs. I can assure you that many hours of debate and study went into these and other problems. The building could have been twice the size or ½ the size agreed upon; the former would have been a business venture and the latter would have met only actual minimal present space requirements. No other location available at the price paid per square foot was within walking distance for so many members, nor so close to the entrance to the new freeways connecting all parts of the city. As to costs, the price paid per square foot was approximately ⅓ less than the market price and its future value is certain to increase for the following generations of our membership.

Finally, whatever methods of financing the project requires, it should prove no real burden on the individual members. Few of us paid anything toward the cost of our present headquarters and should be happy to contribute to a new, modern Society building for ourselves and those to follow. You have already received a small booklet relating to contributions toward furnishing the non-office areas. I hope each member will participate in this project by contributing to the Building Fund.

Public Health Department Liaison Committee

Liaison with Dr. Murray Grant and his Department has greatly improved with the creation of a small Committee, with Dr. Marvin C. Korengold as Chairman. The Committee has met on more than 10 occasions to review the activities of the Health Department and its various proposed projects. The Policy Statement on Public Health adopted by the Society last year is being used as a guide by the Committee. As the Committee becomes more knowledgeable its effectiveness should grow and permit a firmer stand on policy issues.

Committee on Aging

This Committee, under the chairmanship of Dr. Jack Kleh, completed a proposal to improve the District's Medical Assistance to the Aged Program (MAA). The present program was criticized by the Committee as failing "to conform to the intent of the Federal legislation" (Kerr-Mills Law) and specific recommendations were made to the District Commissioners. That this effort to bring better care to the aged fell on deaf ears may be due to the widespread assurance that a new law affecting the health care for the aged would be passed by Congress. Nevertheless, for those who decry medicine as always negative I suggest this proposal as one of many positive actions of this Society.

Medic-Alert Project

During the year the Board has given approval to a program sponsored by the local Life Underwriters Association designed to increase the use of the Medic-Alert emblem. Through the Board's efforts a similar program proposed by the Health Department was combined with that of the Life Underwriters. All members were sent material on this project for use in their offices. It is urged that every member coöperate.

Child Abuse Legislation

The Committee on Child Welfare has undertaken to obtain passage of legislation providing for mandatory reporting of certain physical abuses of children. Dr. Robert H. Parrott, Chairman, appeared at the House hearings and presented the Committee's recommendations, most of which were accepted. If a law is not approved this year the Committee will be urged to push harder during the next session of Congress.

Medicare

The Executive Board created an Ad Hoc Committee on Medicare with Dr. Darrell C. Crain, Chairman, to support the AMA position regarding H.R. 6675, and to seek to clarify to the membership and the public the differences between the Administration bills, the AMA Eldercare proposal and the suggestions of this Society (made to AMA House of Delegates in December 1964).

In addition to appearances on radio and TV and talks before local civic groups, the Committee prepared a pamphlet entitled "A Three-Way View," distributed to all members. The Board also matched a $2,500.00 grant from the AMA to assist in this effort and employed a public relations consultant to work with the Committee. The Executive Board continues its belief that had the AMA adopted this approach last December a far better legislative bill would have resulted for the aged.

AMA-ERF

The Board was privileged to present checks to the 3 Medical School Deans on behalf of the AMA Education and Research Foundation. Howard University School of Medicine received $6,052.58; George Washington University School of Medicine, $13,152.08; and Georgetown University School of Medicine, $18,562.74. These represented funds donated by physicians and designated for the specific schools, plus a portion of undesignated funds divided equally among all schools.

A "Good Samaritan" Law

The membership has long recognized the need for some assurance against unwarranted suits when aiding unknown persons taken ill on the street or injured in accidents. This year, Dr. Alfred A. J. Den and the Committee on Medicolegal Problems reviewed several legislative proposals and made numerous suggested changes. Dr. Samuel Becker appeared before Congressional hearings, and legislation was agreed upon by both the Senate and House and sent to the President.

Section on Obstetrics and Gynecology

On petition of 51 members specializing in obstetrics and gynecology the Executive Board approved the creation of a new Section on Obstetrics and Gynecology. This brings to 19 the number of Specialty Sections to be named in the Constitution and By-laws. The new Council on Specialty Sections is responsible for this new section being created and plans to urge the only 2 specialties now missing from the list of Sections to organize formally. The Sections are the only groupings of physicians having authority to represent the Society in policy matters and will henceforth be urged to work collectively through the Council and Executive Board on all matters of mutual concern.

The Fee Review Committee

This Committee (the former Review Board for Prepaid Medical Benefits) continues to meet monthly to review cases referred by Medical Service of D. C. and the local Health Insurance Council. During the first 9 months of 1965 the Committee reviewed 175 cases compared to 176 cases in the same period of 1964, and 103 cases in 1963. The number of cases continue to represent about ½ of 1 per cent of the total cases handled by Medical Service of D. C., an indication of the coöperation between physicians and "Medical Service," despite some complaints received by the Executive Board.

Dr. Robert Stolar, the Chairman, has worked with the Executive Board to complete a set of "guidelines" started by the former committee. These are published following these reports so that all members may know what the Committee's functions are and how it works. The term "usual and customary" will become more important under P. L. 89-97, as will the functions of this Committee.

Grievance Committee

This Committee, with Dr. Irving Burka as Chairman, continued its monthly meeting schedule as well as holding conferences with individuals involved in complaints. Since November 1964, 46 complaints have been considered. This compares with 39 last year and over 80 the year before last.

The Committee referred only 1 case to the Executive Board with its recommendation for disciplinary action.

Reorganization of Obstetrical Board

The Executive Board accepted with regret the resignations of Dr. C. K. Fraser and Dr. J. Bay Jacobs from the Obstetrical Board and approved a proposal for its reorganization and continuation. This has been completed and is presently under the direction of Dr. Samuel Dodek.

Representatives to Conferences

Continuing its policy of encouraging Society representation at national conferences, the Executive Board has authorized financial assistance for the attendance of 14 members at national conferences this year, an increase over the 10 members attending last year.

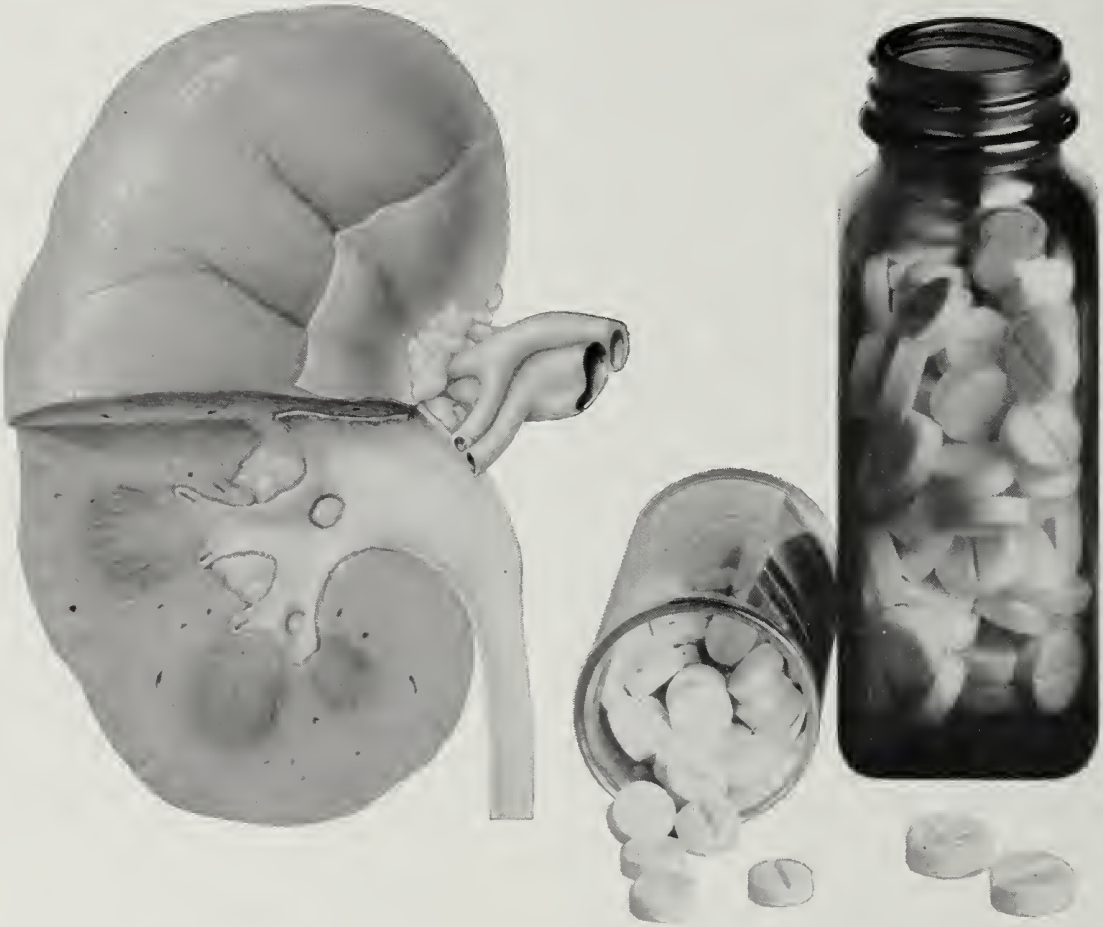
Society Awards

The Executive Board voted to approve presentation of the following awards at the Annual Society Luncheon:

Community Service Award to Preston A. McLendon, M.D., for his many years of service in community activities, including his service as a member of the School Board.

Meritorius Service Awards to C. K. Fraser,

at Merck Sharp & Dohme...



understanding... precedes development

The development of chlorothiazide and probenecid were events of major importance, but perhaps even more important for the future was the Renal Research Program by which they were developed. When Merck Sharp & Dohme organized this program in 1943, it was expressing in action some of its basic beliefs about research:

- Many problems connected with renal structure and function were still undefined or unsolved. The Renal Research Program would begin its basic research in some of these problem areas.
- From knowledge thus acquired might come clues to the development of new therapeutic agents of significant value to the physician.

For example, the Renal Research Program put fifteen years into this search before chlorothiazide became available. But because these years had first led to a greater understanding of basic problems, the desired criteria for chlorothiazide existed before the drug was developed.

Along with other research teams at Merck Sharp & Dohme, the Renal Research Program continues to add new understanding of basic problems—understanding which will lead to important new therapeutic agents.

MSD MERCK SHARP & DOHME Division of Merck & Co., Inc., West Point, Pa.

where today's theory is tomorrow's therapy

M.D., and J. Bay Jacobs, M.D., for their services to the profession in the conduct of studies of maternal morbidity and mortality, and to Eloise W. Kailin, M.D., for over 15 years of dedication in representing the Society in the determination and publication of the pollen count.

John Benjamin Nichols Award to the Kiwanis Club of Washington, D. C., for its many contributions toward health projects for the care of needy citizens of Washington.

Committee on Constitution and By-Laws

Last year this Committee recommended major changes in the Constitution and By-laws. These were presented to the membership by its Chairman, Dr. W. LeRoy Dunn, and all but 1 of the recommendations were approved. Even then further review by the Committee indicated the need for additional changes, although minor ones. Changes recommended are:

1. To provide for handling requests for change in membership status, Chapter II, Article VIII, which specifies classes of membership should include an additional sentence to read: "*Requests for change in membership classification shall be referred to the Board of Credentials. The Board of Credentials shall establish its own procedure for processing such requests.*"
2. There is still some question as to the interpretation of the phrase "or engaged in collateral lines of activity or research" as it refers to Associate membership in Chapter II, Article V. To clarify this it is recommended that this phrase read: "*or doctors of medicine engaged in collateral lines of activity or research whose positions do not require an M.D. degree.*"
3. The costs of operating the Society and particularly the MEDICAL ANNALS and various mailings to members are such that the present Associate members' dues of $15.00 are insufficient to cover such costs. To remedy this and cover present and anticipated costs of operation it is recommended that Chapter IV, Article I, Section 4, be amended so that the dues of Associate members are increased from $15.00 to $30.00 per annum.
4. There is no provision concerning payment of past dues when a member is dropped or leaves the Society and then requests reinstatement. It is recommended that Chapter IV, Article III be amended by changing the last sentence to read: "a member so dropped (for nonpayment of dues) or who leaves the Society voluntarily may be reinstated by the Executive Board, provided all dues for the last year in which the doctor was a member are paid in full."

At the last Annual Business Meeting a recommendation for a change in election procedures was referred back to the Committee on Constitution and By-laws. This Committee agrees, after restudy, that present election procedures are satisfactory. The Executive Board concurs with this; therefore, no further recommendation is made at this time.

Proposed Budget for 1966

The Report of the Secretary-Treasurer refers to the financial aspects of the Medical Society. I believe the points he has made are cogent and practical. The proposed budget for 1966 is based on the best estimates the Board can make in view of the major move to a new and modern headquarters and the need to maintain a competitive position with the continuous pressure on salaries due to the Federal Agency increases.

The proposed budget appears on page 49.

Nominations

Board of Trustees of Medical Service: The Executive Board recommends the following names to be submitted for 3-year terms beginning with the 1966 Annual Meeting of Medical Service of D. C. Before reading these names I should like to pay homage to 1 member who, for almost 15 years, has given untiringly of his time and energies to the prepayment plan created by this Society. To Dr. Henry L. Darner, along with Dr. Donald Stubbs and Mr. "Ted" Wiprud and Mr. George McGovern, we owe a great vote of appreciation for making this plan both workable and solvent. Despite the complaints of some members, Dr. Darner has had the courage to balance his judgment between what we would like and what the subscribers (the public) will accept. For myself personally, for the Executive Board, and for the Society membership I say to Dr. Darner, we thank you for all you have done and hope we can live up to the example your leadership has given to us. Now the nominations: Edward W. Nicklas, M.D., to replace Henry L. Darner, M.D., C. Willard Camalier, Jr., M.D., to succeed himself, and Alfred A. J. Den, M.D., to succeed himself.

Other members include Drs. Frank S. Pellegrini, Leonard T. Peterson, Philip H. Philbin, Jack Kleh, and Donald Stubbs, *ex officio*.

Board of Trustees of Group Hospitalization: The Executive Board recommends the following as a member of the Board of Trustees of Group Hospitalization, Inc., for a term of 5 years: Brooks G. Brown, M.D., to succeed himself.

Others include Drs. O. Hugh Fulcher, Howard P. Parker, and Ralph D. Whitley.

Honorary Membership: The Executive Board is pleased to present the name of Mr. Theodore Wiprud for Honorary membership in this Society. I am sure I need not review the multitude of reasons for this nomination, and personally am most pleased at the honor of presenting his name.

Also nominated for Honorary membership is Rear Admiral Robert B. Brown, Surgeon General of the United States Navy.

Relative Value Study Committee

In view of the obvious increase in importance of having some basis for determining "usual and customary" fees and even in establishing fee schedules under possible Federal and other programs this specially titled committee was created. With Dr. Clifton R. Gruver as Chairman, the Committee completed the task begun over a year ago by the Medical Care Committee. Whether it will be submitted to the membership at this meeting or a special meeting later on depends on certain factors not yet determined. In either event copies will be mailed ahead of time to voting members.

Conclusion

In conclusion, may I thank you who are present here today and those members who have served on committees and in other capacities this past year. It has been a pleasant task serving on the Executive Board, a task where one learns much of the scope and breadth of a Medical Society's activities and the problems of its membership. At this time I should like to state that too many complaints I have heard are based on inadequate information. I believe also that such dissenters in medicine would better serve the common good of the profession by contributing of their time to Medical Society affairs. The medical profession needs unity today more than ever. Each of us is a part of that unity so I urge each of you to accept your part, because whatever our personal prides may be we really can't stand alone nor can we avoid some responsibility to the members of our profession who are to follow us.

Respectfully submitted,
DUANE C. RICHTMEYER, M.D.
Chairman, Executive Board

Report of the Board of Credentials*

SINCE the last Annual Business Meeting, November 15, 1964 the Board of Credentials has interviewed 152 applicants, all of whom were recommended to the Executive Board for membership.

In addition, the Board of Credentials has made the following recommendations to the Executive Board since the last Annual Business Meeting:

1. The Board of Credentials at its June 9 meeting agreed to adopt a policy of reviewing the Resident-Intern membership category every 3 months to eliminate the continuation of Resident-Intern membership status for those physicians who have established a private practice. If the physician fails to comply with the request to transfer his status, he will be informed that he is no longer eligible to maintain his Resident-Intern membership with the Society.

2. The Board of Credentials agreed at its July 14 meeting to recommend to the Executive Board that the letter written to a Society member notifying him that he is to be dropped for non-payment of dues be a registered letter to assure that such notification is received.

We continue to be pleased with the background training and caliber of the applicants to the Medical Society. There continue, however, to be some problems encountered in determining the type of membership to which certain physicians are entitled or which they must accept. The Committee on Constitution and By-laws has again reviewed this portion of the By-laws and may suggest clarifying changes.

Respectfully submitted,
LAWRENCE A. RAPEE, M.D., *Chairman*
LESLIE E. HEDGEPATH, M.D.
PHILIP R. JAMES, M.D.
MICHAEL J. MCINERNEY, M.D.
SEYMOUR ALPERT, M.D.
JACK KLEH, M.D.

---

* Presented at the Annual Busisness Meeting of the Medical Society of the District of Columbia, November 21, 1965.

Report of the Secretary-Treasurer*

In the introduction of this report last year, the duties of a Medical Society Executive were listed, showing a range from maintenance man to confidential advisor. At this time it is necessary to add architect's assistant, hod carrier (cement, that is), and general contractor's errand boy. I learned a motto many years ago for men of success which reads: "Don't write it. Don't say it. Don't think it. By all means don't do it." This shall hang in the office of the new building—if it is ever completed.

Membership

As noted in previous reports, the number of Active members in the Society seems to have reached a plateau.

	Active Members	*Total Members*
1961	1,485	2,233
1962	1,505	2,260
1963	1,532	2,275
1964	1,535	2,313
1965	1,510	2,412

The total membership has increased slightly over the past 5 years; the number of Active members increased very slightly for 4 years and decreased this year because of the change in By-laws adopted in November 1964.

A number of present sources for members remain practically untapped. These are the full-time physicians in local institutions, in Government agencies, and the house staff members of local hospitals. A Membership Committee was appointed this year and for 1966 we hope to provide it with a list of physicians who should be members of the Medical Society and a brochure showing why they should be members.

Society Finances and Activities

Last year the dues of Active Members were increased by $15.00 a year. At the time it seemed reasonable to assume a total Active dues increase of some $22,000.00. However, the adoption of new By-laws for retired and disabled members (a Special membership classification) and a change in eligibility for Life members reduced the actual net increase in total Active dues to less than $15,000.00. Despite this, the present Active dues would be adequate for now if other conditions remained constant. But for a variety of reasons they continue to change.

We have reduced the number of personnel on the general office staff this past 2 years but the competition from continued raises in the salaries of employees of Federal agencies has required increases in the salaries of Society employees to keep present staff members and to recruit new ones. The Medical Annal's financial problems, on the way to solution this year, have been aggravated again by a $400.00 to $500.00 a month increase in printing costs for next year. The Medical Bureau's financial condition remains satisfactory but Federal agency raises will soon require increases in the salaries of Bureau operators.

While it is too early at the time of this report to accurately estimate the actual 1965 income and expense as proposed at the 1964 Annual Business Meeting, it seems that the difference between operating income and expense will be favorable, with a balance in the "black," approximating the $9,645.00 shown in the budget approved last November.

For 1966 the new Society headquarters presents unknown problems in maintenance costs. For the first time the building will be 100 per cent air-conditioned, as compared to about 10 per cent air-conditioning in the present 2 buildings. An air-change system, not in the present building, and 4 meeting rooms instead of 2, as well as parking space for committees, will make for more pleasant meeting and working conditions but may add to costs. An increase in costs is to be expected, although every effort has been made to decentralize controls by units or areas in use at any given time. On the plus side is the saving in parking costs to individual committee members and a reduction in mileage costs for many Bureau members. The proposed budget for 1966 presented by the Executive Board reflects the best estimates available at this time.

The Medical Bureau staff was increased last year, as requested by the Committee, and every effort was made to improve the service. Certain improvements not possible with the present switchboards are planned for the new building and the new, modern equipment. Again, as with general office personnel, the problem of competing salary scales continues to plague the Bureau. This year the starting salaries were increased to meet those of the Telephone Company. Now the Federal Agencies pose an even greater problem; their new schedule is about 20 per cent above ours, excluding their liberal extra benefits for

---

* Presented at the Annual Business Meeting of the Medical Society of the District of Columbia, November 21, 1965.

The Pain Is Gone

Despite introduction of synthetic substitutes, efficacy of 'Empirin' Compound with Codeine remains unchallenged.

'Empirin'® Compound with Codeine Phosphate gr. 1/2 No. 3

Each tablet contains: Codeine Phosphate gr. 1/2 (Warning—May be habit forming), Phenacetin gr. 2 1/2, Aspirin gr. 3 1/2, Caffeine gr. 1/2.

Keeps the Promise of Pain Relief

BURROUGHS WELLCOME & CO. (U.S.A.) INC., TUCKAHOE, N.Y.

pensions, insurance, annual leave, and retirement. Like it or not, the Medical Bureau members are going to have to pay enough in monthly charges to meet competitive salaries. This may or may not mean a raise in charges for 1966, depending on whether Congress continues its 5 per cent plus annual raise in Federal employees' salaries and benefits. Despite the newspaper reports, Federal salaries are far above those of private organizations in the District. I don't know where the Civil Service Commission obtains its information, but whatever the source it is completely in error in so far as local, private employment salaries and benefits are concerned.

Meanwhile the activity of the Medical Bureau continues to increase. Actual recorded calls represent less than 75 per cent of the calls handled, but are the only tangible data for comparison.

	1960	1962	1963	1964	1965 (Estimated)
Recorded Calls	676,049	767,812	822,300	915,706	1,000,000
Subscribers	773	773	775	784	807
No. Operators	27	29	30	34	34

It is evident from the above data that the call load on the Bureau operators continues to increase far beyond the increase in subscribers. One of the peculiarities of such a service is the fact that holidays, Saturdays, and Sundays are the days when everyone seems to need or want his or her physician. The biggest problem on such days, and even regular work days, is to locate physicians. A new rule by the Committee that every Bureau member have 1 or more alternates may alleviate this problem.

The Medical Bureau is a real service to the public as well as to physicians. We hope that in 1966 the Bureau will be more helpful to both.

The Medical Annals' financial problems have continued to increase since about 1960, when the Federal Government investigations resulted in a decline in advertising. To combat this the number of total pages have been reduced and other changes made. Every effort has been made to reduce the $20,000.00 deficit in 1961 and 1962 to a reasonable amount, about $4.50 per member. This year it seemed the solution was at least a possibility, but now notice has been given of a raise in printing costs of over $400.00 a month. This destroys all efforts made the past 3 years and again places the Medical Annals in a position to require a subsidy of some $20,000.00 for 1966. This is far above the normal subsidy required for a state medical journal and reduces funds available for other Society activities. In view of this, the Executive Board was requested to approve the selection of a committee to review the financial problems of the Medical Annals and to recommend possible approaches to solving the problem.

The new Society Headquarters is well on the way to completion. It will be a centrally located building (within walking distance of about 500 members), with adequate meeting facilities and enough space to accommodate any conceivable future expansion. Furthermore, it will be one of the best built buildings in this area, to the amazement of every worker on the job, who seems used to "cutting corners."

Many members have raised questions, some critical, some just for information, and some of a type that seem to be plain "gossip." This is not the place to repeat or answer such questions. The Society's office is open at any time to any member. It should be noted, however, that every question raised was considered by the Building Committee and the Executive Board with legal and expert real estate advice. It should also be noted that: (1) Building anything in this city is a hair-raising experience; (2) the location selected is within the center of the greatest concentration of members; (3) the building faces a park so that its view will never be impaired; (4) a 9-story building for rental to doctors would have proved an impossible task for whoever selected the tenants; and (5) the land was obtained at some $25 per square foot less than the present market value, which itself will continue to increase.

Located with us in the building will be the D. C. Division of the American Cancer Society, the Washington Heart Association, the Gorgas Society, and the Metropolitan Washington Blood Banks. This is a good concentration of voluntary health agencies and should prove of value to all of us in better serving the public.

In conclusion it seems reasonable to reiterate what I have continually stated. It is the function of the Secretary-Treasurer (and Executive Director) to express his views to the Executive Board, committees, and members with full knowledge that he has no vote on policy. Every member has equal access to the Executive Office. We shall, as your staff members, do the best we can to serve you. We appreciate constructive criticism so do not hesitate to call on us for assistance where it is within our province to be of assistance. This is your Society, so participate where and when you can do so.

Respectfully submitted,
George W. Cooley
Secretary-Treasurer
(and Executive Director)

Guidelines for the Fee Review Committee (for Major Medical Coverage)

The major medical insurance concept has become a popular form of coverage in the United States, including the Metropolitan Washington Area. It differs from other forms of basic medical, surgical, hospital expense coverage in that it provides reimbursement to the insured (subject to deduction and co-insurance provisions) for "usual and customary" expenses incurred by the insured when provided "reasonable and necessary" medical services. Both sets of conditions depend upon the judgment of the practicing physician. "Usual and customary" refers to normal charges by physicians in the area in which the coverage is issued, with consideration as to complications which may arise and the income of the insured (individual and family). "Reasonable and necessary" refers to the use of proper judgment in selection of services rendered by the individual physician or physicians providing the services.

Some 99 per cent of major medical claims represent "reasonable and necessary services" and "usual and customary" fees and are settled routinely. The remaining 1 per cent vary to an extent which warrants consideration as to the insurer's liability. Such consideration should be based on all known factors and may or may not support the fee requested as an acceptable liability of the carrier to the insured under the contract between them. Whatever the recommendation as to this liability, it does not refer to the propriety of the fee agreed upon between the insured and the physician; this is strictly between patient and doctor.

In the mutual interest of the public (the insured), the physicians, and the carriers, this Medical Society has accepted the referral of such cases warranting further consideration and its Fee Review Committee has been authorized to render impartial judgment in all cases referred to it by Medical Service of D. C. and the D. C. Health Insurance Council.

It should be emphasized again that the judgments and recommendations of the Fee Review Committee shall in no sense be considered as setting a fee, since this is the unique prerogative of the physician and his patient based upon full consideration of all aspects of the case. The Fee Review Committee's recommendations refer to the amount of money the insuring organization should consider in discharging its obligation to the insured patient on the basis of the "usual and customary" fee clause in its contract. Any dispute between the physician and patient as to the total fee should be referred to the Grievance Committee of this Society.

Organization

The Fee Review Committee shall consist of 12 Active, Special or Life members of this Society, representing various specialties, selected by the President and approved by the Executive Board. Each member shall be appointed for a term of 3 years, with 4 members appointed each year. No member shall serve more than 3 consecutive terms. The Chairman shall be selected by the President. The Fee Review Committee shall meet as frequently as is necessary to provide for prompt consideration of cases referred to it. The usual quorum of 8 is unnecessary; instead, those present shall decide whether those present represent the specialties with which the cases are concerned. If so, it may proceed. If it is decided that a case requires additional data or consultation, it shall be postponed until such is obtained or available. Section or other Society committee representatives may be consulted or invited to attend meetings as consultants when additional advice or information is needed.

Method of Operation

The Committee shall determine its own general operating procedures. Certain specific procedures, however, should be required:

(A) Data on all cases (16 copies) should be provided to the Society's office no less than 1 week prior to the scheduled meeting. These will be reviewed by the Chairman or Vice Chairman and, where indicated, referred to 1 or more Committee members for review prior to the meeting.

These data shall include the following:

1. Case number
2. Occupation and marital or family status of patient
3. Income range of person or family
4. Diagnosis or diagnoses
5. Treatment schedule, with amplifying data and/or attached data showing office and/or hospital visits and treatment and all facts necessary to determine any variation from normal situation.
6. Any additional specific information relative to the case which would support charging a fee or fees other than customary and usual.

(B) Until the Committee reaches a decision, the physician and fee involved shall remain anonymous.

(C) All cases referred will be by case number only, with neither physician nor patient identified.

(D) A representative of Medical Service of D. C. and the Health Insurance Council (D. C. Chapter) shall be available to present such data as the Committee may require.

(E) The Committee shall consider all of the above data and information. In cases without data showing an abnormal situation, its decision as to "usual and customary" fees should be considered in reference to the Relative Value Schedule of this Medical Society and with the following basic conversion factors as guides:

	Basic Conversion Factors			
Income	Surgery	Medical	Pathology	Radiology
Under $6,000 per family				
6,000 to 7,500				
7,500 to 10,000				
10,000 to 15,000				
15,000 to 25,000				
25,000 to 40,000				
Over 40,000				

Deviations from normal or usual cases may require that the Fee Review Committee consider variations from the above conversion factors in arriving at a fair determination.

(F) The Committee, after consideration of each case, shall notify Medical Service of D. C. or the Health Insurance Council (D. C. Chapter) of its determination by case number.

(G) Medical Service of D. C. or the Health Insurance Council (D. C. Chapter) shall then notify the physician or surgeon of the Fee Review Committee's determination as to a "usual and customary" fee in this area for the services rendered in the case, reminding the physician that this concerns the obligation of the insurer under its contract and not any agreement on a fee made between physician and patient.

(H) Each physician or surgeon so notified will have 2 weeks within which to request a hearing by the Fee Review Committee on any given case. The physician may contest the decision in person or in writing. Following such a hearing the Committee shall notify Medical Service of D. C. or the Health Insurance Council of a change in or a reaffirmation of the original determination.

When the functions of the Fee Review Committee are completed Medical Service of D. C. or the Health Insurance Council (through its member companies) shall notify those concerned of the Committee's recommendations. In such notification, it must be made clear that the Fee Review Committee does not set fees but only recommends the probable and normal liability of the insurer under the "usual and customary" fee clause in the contract between insurer and insured as it concerns the case under consideration.

"Registered Nurses—For Private Duty"
U. S. EMPLOYMENT SERVICE
PROFESSIONAL OFFICE
GRADUATE NURSES REGISTRY
SOLAR BUILDING
1000 16th St., N.W.—Room 705
WASHINGTON, D. C. 20212
CALL—DISTRICT 7-1129
24-hour telephone service—
7 days a week

Proposed Budget 1966

INCOME:		
Dues (gross)	$139,375.00	
Allotment to Annals	10,000.00	
Net dues income	$129,375.00	
Other Income:		
Office Space Leases	$32,500.00	
Interest on Savings	3,000.00	
Property Sale (balance paid annually for 10 years)	15,000.00	
Miscellaneous	500.00	
	$51,000.00	
Total General Fund		$180,375.00
Medical Annals		
Advertising etc.	$29,100.00	
Dues Allotment	10,000.00	
		39,100.00
Medical Bureau		150,000.00
TOTAL INCOME:		$369,475.00
EXPENSES:		
General Fund:		
Office Staffing		
(Salaries, retirement, insurance, etc.)	$70,800.00	
Society Programs	16,750.00	
Building Maintenance	24,050.00	
Principal on Interest Loan	40,000.00	
Office Supplies, Equipment, Postage, etc.	11,750.00	
Total General Fund:		163,350.00
Medical Annals		49,120.00
Medical Bureau		151,450.00
TOTAL EXPENSES:		$363,920.00

Report on National Conference on Physicians and Schools

The Tenth National Conference on Physicians and Schools, sponsored by the Department of Community Health and Health Education of the American Medical Association, was held in Chicago, September 23, 24, and 25, 1965. All State Medical Societies are invited to send official representatives to these conferences. The American Medical Association, American School Health Association, American Public Health Association, and Academy of Pediatrics were especially well represented. These biennial conferences were established to give an opportunity for coöperative efforts in education, medicine, and Public Health in determining school health policies and practices.

The topics discussed which are demanding the attention of educators and physicians are: Mental Health, Sex Education, and The Role of the School and Community in Education Concerning Harmful Substances, such as Narcotics, Alcohol, and Smoking.

There was general agreement that special health classes should be conducted in the schools by well-qualified health educators. There is need for better teacher training in the fields of health. Local physicians should be encouraged to act as consultants in curriculum development and in the screening of information and material supplied to teachers in the classroom.

State conferences similar in structure to the National Conference on Physicians and Schools have been organized throughout the country to develop understanding of the concerns of medicine and education in school health.

There are many activities and publications in the field of school health to interest physicians and educators. Among them are publications of the Joint Committee on Health Problems in Education of the A.M.A. and the N.E.A., available at the American Medical Association and the National Education Association. The publications of the "Health Education Study," sponsored by the Bronfman Foundation, emphasized the importance of health education in the schools and is available at the National Education Association. The publications "Teamwork in School Health" and "Why Health Education" are available at the A.M.A. or N.E.A. offices.

The School Health activities in California have attracted wide attention. "The California Joint Study of Student Health Problems and School Performances" was sponsored by the Dairy Council of California.

The School Health Committee of the American Academy of Pediatrics, the American Public Health Association, and the American School Health Association are valuable sources of information on School Health. The proceedings of these conferences, which represent a span of 20 years of activity in School Health, can be obtained from the American Medical Association.

Harold M. Hobart, M.D.
Representative of the D. C. Medical Society;
Consultant to the Tenth National Conference
on Physicians and Schools.

Honorees at Society's Annual Assembly

President Paul R. Wilner presided at the Annual Awards Luncheon of the D. C. Medical Society, November 23, during the 33rd Annual Scientific Assembly, which was held at the new Washington Hilton for the first time. Special tables were set aside at the luncheon for Past Presidents of the Medical Society. Among those present was Dr. Henry C. Macatee, who was President in 1921 and who served the Society as Secretary for many years. Also introduced were the presidents of surrounding County Medical Societies and the Society's 2 newest Honorary members, Rear Admiral Robert B. Brown, Surgeon General of the Navy, and Theodore Wiprud, who retired as Secretary-Treasurer of the Society in 1962.

Meritorious Service Awards were presented to 3 members of the Society. Dr. C. K. Fraser and Dr. J. Bay Jacobs, who for many years served as Chairman and Secretary, respectively, of the Obstetrical Board, were cited for their nationally recognized work in the field of maternal morbidity and mortality. Dr. Eloise Kailin was honored for the remarkable public relations job she has done on pollen count reporting for the Medical Society over a period of 15 years.

The John Benjamin Nichols Lay Award for outstanding service in community health went to the Kiwanis Club in recognition of both dollars and hours given to its numerous health projects, e.g., services to handicapped children and vocational guidance. Mr. William H. McGee, President of the Kiwanis Club of Washington, D. C., was present to accept the award.

The Community Service Award, made possible by the A. H. Robins Company of Richmond, Va.,

AWARD WINNERS AT 33rd ANNUAL SCIENTIFIC ASSEMBLY LUNCHEON

DISPLAYING THE AWARDS they received at the Annual Luncheon of the D. C. Medical Society, November 23, are (left to right): Dr. J. Bay Jacobs, Dr. C. K. Fraser, Dr. Preston A. McLendon, President Paul R. Wilner, who presided and presented the awards, Dr. Eloise W. Kailin, and Mr. William H. McGee.

went to Dr. Preston A. McLendon, a member of the District School Board and an active participant in community affairs for many years.

Dr. Raymond A. Osbourn, Chairman of the Committee on Scientific Exhibit, was called to the rostrum to present the winners in the Scientific Exhibit. Cited for excellence were the following:

First Award: "Nephrotomography," by Richard P. Karpawich, M.D., Gunter J. Augustin, M.D., and Gregory T. Henesy, M.D., Washington Hospital Center.

Second Award: "Treatment of Skin and Soft Tissue Ulcers with Sugar," by James W. Barnes, Jr., M.D., Glenn Dale Hospital, Glenn Dale, Md.

Tied for Third Award: "Laser—A Surgical Tool," by Paul E. McGuff, M.D., Ph.D., Children's Hospital, Cincinnati; "Inhalation Therapy—Dynamic Arm of Anesthesiology," Colonel John A. Jenicek, MC, Chief of Anesthesia and Operative Service, and Mr. Leslie Freedman, Walter Reed General Hospital; Lt. Colonel Timothy Barila, MC, and Major James A. Meyer, MC, Walter Reed Army Institute of Research.

Three exhibits received Honorable Mention:

"Peripheral Congenital Arteriovenous Fistulas," by D. Emerick Szilagyi, M.D., J. P. Elliott, M.D., Roger F. Smith, M.D., F. J. DeRusso, M.D., Henry Ford Hospital, Detroit.

"Allergic Disorders in Negro Children," Roland B. Scott, M.D., Teoman Saracli, M.D., and Angella D. Ferguson, M.D., Department of Pediatrics, Howard University College of Medicine.

"Cardiac Valvular Replacement by a Universal Discoid Valve," Charles A. Hufnagel, M.D., John F. Gillespie, M.D., and Peter W. Conrad, M.D., Georgetown University Hospital.

The luncheon meeting concluded with an excellent discussion of Medicare and Social Security by John Troan, of Scripps-Howard, who is an authority and an outstanding newspaper writer on the Social Security Law.

On Monday, November 22, Georgetown and George Washington University Medical Alumni Associations sponsored luncheons. Dr. Wallace M. Yater, Editor of the MEDICAL ANNALS, was the speaker at the Georgetown Luncheon. At the conclusion of his address he was named Emeritus Professor of Medicine at Georgetown. Dr. Yater served as Professor and Director of the Department of Medicine at Georgetown from 1930 to 1945.

At the George Washington Luncheon, Dr. Walter A. Bloedorn, retired Dean of Medicine, was given an enthusiastic ovation in recognition of his birthday of the same date. He was presented a Certificate of Appreciation by the medical alumni for his "distinguished and outstanding contributions to the Medical School as its Dean from 1938 to 1957." Speaker for the George Washington Luncheon was the new President of the University, Dr. Lloyd H. Elliott.

n breadwinner's anxiety...

He's 40, but probably feels older.
is income is average, but he thinks it
nadequate. He'd like to achieve more but feels
ied down. His health is good,
ut he thinks not.
This anxious patient and others can
eel more comfortable on Vistaril...
ecause Vistaril calms smoothly, makes them
eel better without the euphoria or psychic
vergratification that fosters habituation.

What is Vistaril? Vistaril is hydroxyzine, a tranquilizer entity, totally different from the diazepines, meprobamates and the phenothiazines. While equal to the diazepines and meprobamates in effectiveness, Vistaril has been remarkably free of the unwanted psychic and somatic reactions associated with other tranquilizing agents because its primary effect is exerted at the seat of anxiety.

Vistaril tranquilizes with less complication than do the phenothiazines. Unwanted effects, such as hepatotoxicity, blood dyscrasias, skin pigmentation, and opacities of lens and cornea, are not characteristic of Vistaril activity.

Vistaril tranquilizes with less complication than do the minor tranquilizers. Withdrawal symptoms, possible psychotropic drug incompatibilities, blood dyscrasias and hepatotoxicity, seen with some minor tranquilizers, are not characteristic of Vistaril.

No other tranquilizer is as precise, as uncomplicated, as Vistaril®

(HYDROXYZINE)

Its site of action is the seat of anxiety

Pfizer Since 1849

Science for the world's well-being

Turn page for brief summary...

The record of hydroxyzine experience:

Eight years of clinical effectiveness, over 1,000,000,000 doses prescribed, more than 500 published papers covering nearly 15,000 patients...

Contraindications: Hypersensitivity to hydroxyzine. The parenteral solution, for intramuscular or intravenous use, *must not* be injected subcutaneously or intra-arterially.

Precautions: Hydroxyzine may potentiate the action of central nervous system depressants. In conjunctive use, dosage for these drugs should be decreased. Because drowsiness may occur, patients should be cautioned against driving a car or operating dangerous machinery. The usual precautions for intramuscular injection should be followed; soft-tissue reactions have rarely been reported when proper technique has been used. On reported intravenous injection a few instances of digital gangrene have occurred distal to the injection site, considered to be due to inadvertent intra-arterial injection or periarterial extravasation. Therefore, particular caution should be observed to insure injection only into intact veins; avoid either intra-arterial injection or extravasation. Intravenous administration should be accomplished slowly, no faster than 25 mg. per minute, and not to exceed 100 mg. in any single dose.

Adverse Reactions: Drowsiness may occur; if so, it is usually transitory and may disappear in a few days of continued therapy or upon dosage reduction. Dryness of the mouth may be seen with higher doses. Involuntary motor activity has been reported in some hospitalized patients on higher than recommended dosage.

Supply: Vistaril (hydroxyzine pamoate) Capsules: 25 mg., 50 mg., 100 mg. Vistaril (hydroxyzine pamoate) Oral Suspension: 25 mg. per 5 cc. Vistaril (hydroxyzine HCl) Parenteral Solution: 25 mg./cc.—10-cc. vials, and 50 mg. /cc.—2-cc. and 10-cc. vials.

More detailed professional information available on request.

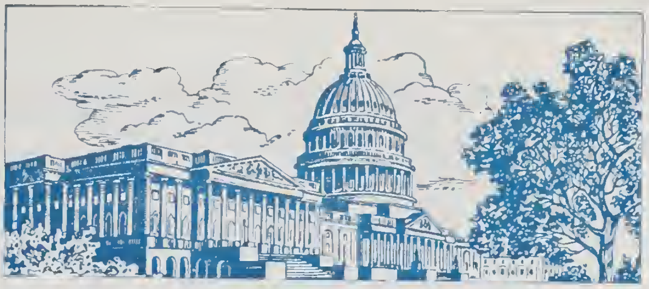
The Vistaril site of action is the seat of anxiety

No other tranquilizer is as precise, as uncomplicated, as

Vistaril
(HYDROXYZINE)

Science for the world's well-being®
Pfizer
Since 1849

PFIZER LABORATORIES
DIVISION, CHAS. PFIZER & CO., INC. NEW YORK, N.Y. 10017



NEWS & PERSONALS

Meetings

The American Diabetes Association is sponsoring its **Thirteenth Postgraduate Course, Diabetes in Review: Clinical Conference 1966**, at The Mayflower in Washington, January 19, 20, 21, in coöperation with the Schools of Medicine of Johns Hopkins University, the University of Maryland, George Washington and Georgetown Universities, and Howard University College of Medicine. Dr. Louis K. Alpert, of Washington, and Dr. Samuel P. Asper, Jr., of Baltimore, are Co-directors of the Course. The 5 medical colleges are represented on the local committee by Drs. Samuel P. Bessman, W. Lester Henry, Jr., Malcolm M. Martin, Maurice Protas, and Thaddeus E. Prout.

Registration fee is $40 for members of the Association and $75 for nonmembers. Fellows, residents, interns and graduate students in medicine or in allied sciences may register and attend the scientific sessions without charge. If space permits, the same applies to medical students, who may register without charge after January 7.

The course is acceptable for accredited hours by the American Academy of General Practice.

Registration forms and programs may be obtained by writing to the Association, 18 East 48th Street, New York, N. Y. 10017.

A Venereal Disease Postgraduate Seminar for physicians and lay leaders of the Washington Metropolitan Area will be held, March 2 and 3, in the auditorium of the Medical Society's new building at 2007 Eye Street, N. W. Speakers, who will include physicians from the Communicable Disease Center in Atlanta, Ga., will discuss particularly problems which physicians see in their offices. Meetings are scheduled from 9 a.m. to 12 noon and from 2:30 to 4:30 p.m. both days; in addition there will be an evening meeting. Physicians are urged to hold these days open; further information will appear in the February issue of the ANNALS.

General News

The Southern Medical Association at its 59th Annual Meeting in Houston, Texas, November 1–4, installed into office Dr. J. Garber Galbraith, of Birmingham, Ala., as President. Dr. Guy T. Vise, of Meridian, Miss., was elected President-elect. Elected First Vice president was Dr. Oscar B. Hunter, Jr., of Washington.

Two Washington area exhibits received Honorable Mention in the Scientific Exhibit: "Aids in Diabetic Management," by Dr. DeWitt E. Delawter and James M. Moss, of Georgetown University School of Medicine, and "Isolation of the Rectum in Obstetrics and Surgery," submitted by Dr. Christopher J. Murphy, Dr. John J. O'Connor, and Miss Jean E. DeVries, all of Alexandria Hospital, Alexandria, Va.

The Section of Ophthalmology of the Southern Medical Association, which met in Houston conjointly with the parent organization, elected as Vice Chairman, Dr. William J. G. Davis, of Washington.

The next meeting of S.M.A. will be held in Washington, D. C. and is scheduled for November 14–17, 1966.

The American Medical Association, through its Judicial Committee, is sponsoring a student **Medical Ethics Essay Contest** for the academic year 1965–1966, named in honor of the late Norman A. Welch, M.D., who died, September 3, 1964, while serving as President of AMA. The contest is open to junior and senior students of any accredited medical school in the United States. Prizes will be awarded for the winning essays in the following denominations: first prize, $500; second, $300; and third, $200. June 1, 1966 is the deadline for entries in the contest, which the Judicial Committee hopes will be continued on an annual basis. Awards will be announced at the AMA Clinical Convention in November, 1966.

Complete contest rules as well as suggested topics are available upon request from the Department of Medical Ethics of the AMA, 535 North Dearborn Street, Chicago, Ill. 60610. They also may be obtained at the offices of the deans of the medical schools.

The Board of Trustees of the National Medical Foundation for Eye Care, at a meeting in Des Plaines, Illinois, October 16, 1965, voted to change the name of its organization to the **American Association of Ophthalmology.** The new name indicates the growing responsibilities and the broadening interests of the Association.

An Interagency Council on Smoking has been established in the District of Columbia under the chairmanship of Mr. William Becque, Executive Director of the D. C. Tuberculosis Association. The Council, which includes his and 9 other agencies concerned with health and education, was organized to coördinate their activities in the field of smoking and health and to implement joint smoking control programs in the District of Columbia. Mrs. Beatrice B. Mair, formerly consultant in school education for the Pennsylvania Department of Health, will serve the Council as Executive Secretary.

The Medical Society of the District of Columbia is represented on the Council by Dr. George W. Ware. Other participating organizations are the D. C. Division of the American Cancer Society, D. C. Dental Society, D. C. Department of Education, D. C. Department of Health, D. C. League of Nursing, D. C. Public Health Association, Medico-Chirurgical Society of the District of Columbia, and the Washington Heart Association.

Council headquarters are at 451 Indiana Avenue, N. W. The organization was made possible by a grant from the Public Service.

The National Multiple Sclerosis Society has distributed an informative newsletter, to be published twice a year, called *Patient Service News.* Through the newsletter it seeks to inform chapter volunteers, patients, staff and professional personnel throughout the country of the latest news and developments in the field. The first issue, dated October 1965, includes a Legislative Supplement which highlights the Medicare program. Future supplements will contain information about new legislation which is especially significant for MS patients and their families. Copies are available upon request to the Society at 257 Park Avenue South, New York, N.Y. 10010.

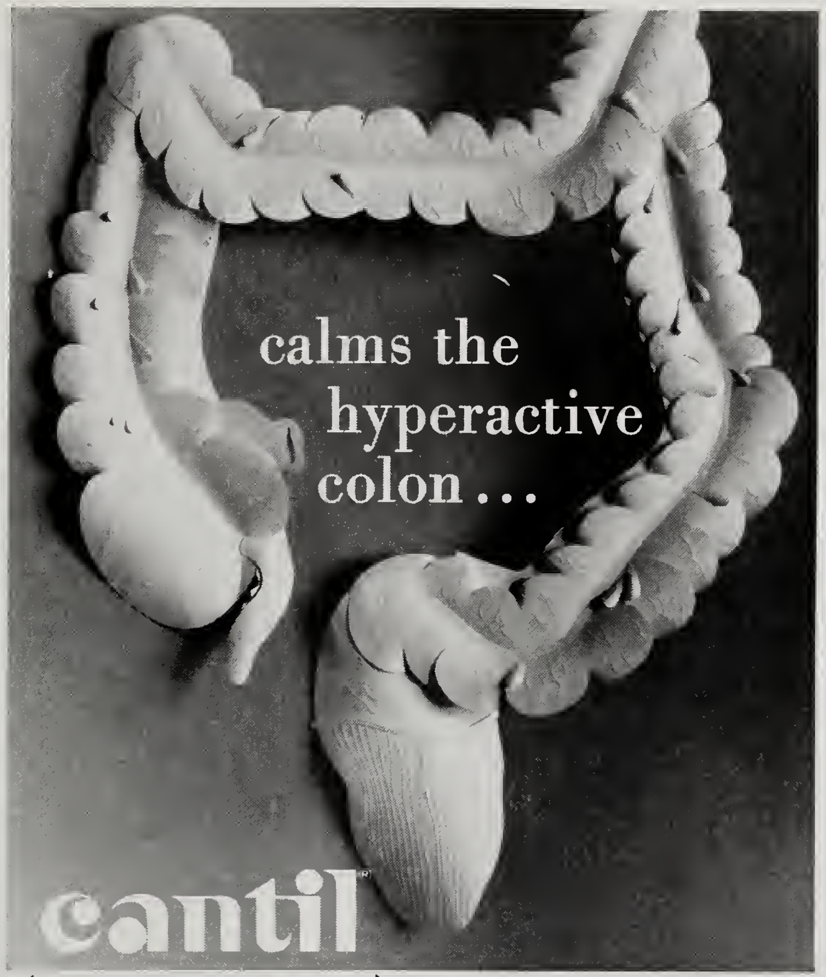
The Board of Directors of the Pharmaceutical Manufacturers Association elected C. Joseph Stetler, of Washington, President of the Association, December 7, 1965, effective immediately. At the same time the Board accepted the resignation of President Austin Smith, M.D., and the Board of Directors of Parke, Davis & Company in Detroit announced it had elected him Vice Chairman, effective January 1.

Mr. Stetler has been Executive Vice President and General Counsel of the PMA since 1963. Prior to that he was General Counsel of the American Medical Association and Director of its Legal and Socio-Economic Division. Dr. Smith, PMA's first full-time President, was elected to that position in 1959 following his service as Editor of *The Journal of the American Medical Association.*

Dr. Leo J. Gehrig has been appointed **Deputy Surgeon General of the Public Health Service.** Dr. Gehrig received his degree in medicine from the University of Minnesota School of Medicine in 1945, and was commissioned officer in the Public Health Service the same year. He was the first Medical Director of the U. S. Peace Corps, and developed the initial program of the Corps in Asia, Africa and South America. He has recently served as Chief of the PHS Bureau of Medical Services.

Brig. General Philip W. Mallory, who for the past 2 years has been Commander of the 97th General Hospital at Frankfurt, Germany, is the **new Commander of the Walter Reed General Hospital.** He succeeds Major General Henry S. Murphey. The Walter Reed Medical Center, of which the Hospital is a part, is under the new command of **Major General Douglas B. Kenrick.**

Dr. Edmund S. Nasset has been appointed Visiting Professor of Physiology at the George Washington University School of Medicine, effec-



(mepenzolate bromide)

helps restore normal motility and tone

Cantil (mepenzolate bromide) works in the colon. In irritable colon, spastic colon, ulcerative colitis and other functional and organic colonic disorders, it acts to:

- control diarrhea/constipation
- relieve spasm, cramping, bloating
- make patients more comfortable

with little effect on stomach, bladder or other viscera.

"In 40 of 44 cases of irritable or spastic colon, Cantil [mepenzolate bromide] or Cantil with Phenobarbital reduced or abolished abdominal pain, diarrhea and distention and promoted restoration of normal bowel function . . . Cantil [mepenzolate bromide] proved to be singularly free of anticholinergic side-effects. Blurring of vision or dryness of the mouth were occasionally seen and were usually managed with a reduction in dosage. Urinary retention, noted in two cases was eliminated in one by reducing dosage."[1]

IN BRIEF:

One or two tablets three times a day and one or two at bedtime usually provide prompt relief. Cantil with Phenobarbital may be prescribed if sedation is required.

Dryness of the mouth or blurring of vision may occur but it is usually mild and transitory. Urinary retention is rare. Caution should be observed in prostatic hypertrophy—withhold in glaucoma. Cantil with Phenobarbital is contraindicated in patients sensitive to phenobarbital.

Supplied: CANTIL (mepenzolate bromide)—25 mg. per scored tablet. Bottles of 100 and 250.

CANTIL with PHENOBARBITAL—containing in each scored tablet 16 mg. phenobarbital (warning: may be habit forming) and 25 mg. mepenzolate bromide. Bottles of 100 and 250.

1-Riese, J.A.: Amer. J. Gastroent. 28:541 (Nov.) 1957

LAKESIDE LABORATORIES, INC.
Milwaukee, Wisconsin 53201

Diagnostic Problems
... With Your Securities?

You need a complete securities "Check-up." Let our Research Department make a thorough analysis of your holdings. Perhaps we can discover the cause of your complaint and prescribe a few beneficial changes that will remedy the problem. No obligation.

To obtain your copy of our convenient Inventory Form for listing securities

Just Phone or Stop By

FERRIS & CO.

Members New York Stock Exchange
611 Fifteenth St. N.W
STerling 3-8222

tive January 1, 1966. A teacher and scientific investigator of international reputation, Dr. Nasset became Emeritus Professor of Physiology at the University of Rochester in July, 1965, after 34 years on the faculty. He holds the degree, Doctor of Philosophy in Physiology from the same University. Dr. Nasset will continue his research in amino acid metabolism and protein utilization at George Washington. He intends to develop a new field of investigation in the cannulation of digestive gland microstructures.

The Sibley Hospital Medical Alumni Association has elected the following officers:

Dr. Thomas F. Cullen, *President*; Dr. Harvey Ammerman, *Vice President*; Dr. Albert J. Miele, *Secretary*; Dr. William G. Battaile, *Treasurer*; and Dr. W. Robert Perkins, Jr., *Historian*.

The annual Scientific Symposium of the Association will be held at the Sibley Hospital auditorium on May 5, 1966.

The Fairfax (Va.) Hospital Medical Staff elected new officers recently. They are:

Dr. Joseph A. Provenzano, Annandale, *President*; Dr. James R. McClelland, McLean, *Vice President*; and Dr. Robert L. Guillaudeau, McLean, *Secretary-Treasurer*.

Dr. McClelland is an Associate member of the D. C. Medical Society. Dr. Robert J. O'Donnell, of McLean, also an Associate member, was elected to the Medical Staff's Executive Committee.

The National Cancer Institute of the National Institutes of Health has published a new pamphlet, the ninth in a series of 10 prepared for the general public on cancer of different body sites. The latest is **"Cancer of the Prostate."** Single copies (PHS Publication No. 1352) are available without charge from the Public Health Service, Washington, D. C. 20201.

Major General Paul R. Hawley, MC, USA (Ret.), Chief Surgeon for Allied Forces in Europe during World War II and Past Director of the American College of Surgeons, died, November 24, 1965, at Walter Reed General Hospital.

After leaving the service in 1946, General Hawley became the first Chief Medical Director of the Veterans Administration, and later was Chief Executive Officer of Blue Cross and Blue Shield. He left the latter position in 1950 to assume the directorship of the American College of Surgeons in Chicago, retiring in 1961.

In an editorial tribute, November 27, *The Washington Post* said of him: ". . . countless numbers of military veterans owe their lives to his organizational genius and tactical skill. . . . But the high standards in Veterans Administration hospitals, which now have a medical care budget of over $1 billion and handle some 750,000 patients each year, are his monument."

Captain John W. Jamison, USN (Ret.), President of the Lost Chord Club, died, November 20, 1965, at Bethesda Naval Hospital.

In 1953, a few years after he had retired from the Navy, Captain Jamison underwent a laryngectomy. He learned to speak again and then devoted much of his time to helping others do the same. He was a director of the International Association of Laryngectomies, and a member of the Board of Trustees of the American Society's Washington Chapter. In 1962 the D. C. Division of the American Cancer Society gave him its highest award, the St. George Medal and citation.

Captain Jamison was a veteran of both World Wars and an expert on amphibious warfare. After World War II he was an instructor in the amphibious section of the Army and Navy Staff College in Washington, and was commended by both services for his work.

Dactilase
LAKESIDE

more complete relief for the "dyspeptic"

DACTILASE®

Dactilase provides comprehensive therapy for a wide range of digestive disorders. Its antispasmodic and anesthetic actions rapidly relieve pain and spasm. Dactilase decreases hypermotility without inducing stasis. In addition, it supplies digestive enzymes to help reduce bloating, belching and flatulence. Dactilase does not interfere with normal digestive secretions. Very often it can be a most useful answer to the dyspeptic's needs.

DACTILASE: Each tablet contains: Dactil® (piperidolate hydrochloride), 50 mg.; Standardized cellulolytic* enzyme, 2 mg.; Standardized amylolytic enzyme, 15 mg.; Standardized proteolytic enzyme, 10 mg.; Pancreatin 3X** (source of lipolytic activity), 100 mg.; Taurocholic acid, 15 mg.

*Need in human nutrition not established. **As acid resistant granules equivalent in activity to 300 mg. Pancreatin N.F.

Side Effects and Contraindications: DACTILASE is almost entirely free of side effects. However, it should be withheld in glaucoma and in jaundice due to complete biliary obstruction.

Administration and Dosage: One tablet with, or immediately following each meal. Tablets should be swallowed whole.

Supplied: Bottles of 60 and 250.

LAKESIDE LABORATORIES, INC.
Milwaukee, Wisconsin 53201

Personals

Six Technical-Advisory Committees have been appointed by the Department of Health, Education, and Welfare to assist in the development of regulations for implementing Medicare. Among physician appointees are **Dr. James J. Feffer,** who was recently appointed consultant to Dr. John W. Cashman, Chief, Division of Medical Care Administration, U. S. Public Health Service; **Dr. John A. Kenney, Jr.,** representing the National Medical Association; **and Dr. Daniel F. Lynch,** President of the American Society of Oral Surgeons, representing the American Dental Association.

Dr. Ralph G. Beachley, retired Director of Public Health of Arlington County, Va., has been named Executive Secretary of the George Washington University Medical Alumni Association. Dr. Beachley, who is the first executive head of this group, is an alumnus of George Washington University, was on the faculty of the School of Medicine for 27 years, and was named Professor Emeritus in 1963.

Dr. Beachley recently was elected to the Board of Directors of the Fidelity National Bank of Arlington, Va.

Dr. Laurence H. Kyle, Chairman of the Department of Medicine at Georgetown University School of Medicine, testified before the Subcommittee on Public Health and Welfare of the Committee on Interstate and Foreign Commerce, House of Representatives, on September 30, 1965. He represented the American Medical Association as its Alternate Delegate of the Section on Experimental Medicine and Therapeutics. The subject under consideration was Laboratory Animal Care Legislation. Dr. Kyle described in some detail what has been done voluntarily over the years by interested scientific organizations to improve the standards of treatment of laboratory animals.

Dr. Clifton A. Brooks has been appointed by the Executive Board of the National Capital Area Council of Boy Scouts of America to serve as Assistant Council Commissioner in charge of Sea Explorer Roundtables. Dr. Brooks has served as Skipper of Ship 221, sponsored by the Concord Methodist Church in Bethesda, Md., for the past 2 years. He is also a member of the Coast Guard Auxiliary.

Dr. Abe M. Cohen, Silver Spring, Md. pediatrician and an Associate member of the D. C. Medical Society, was honored at a testimonial dinner, November 4. He received a check for $2,800, which he in turn presented to Children's Hospital. The dinner, held at the Indian Head Country Club in Glenmont, was an expression of appreciation by some 1,000 parents for his services to their children during 25 years of practice.

The following members of the Medical Society of the District of Columbia were elected Fellows of the American College of Physicians at the meeting of its Committee on Credentials, November 13, 1965: **Drs. Habeeb Bacchus, Edward A. Beeman, James J. Foster, Louis Gillespie, Jr., George A. Kelser, Jr., Rashid A. Massumi, and Frank J. Talbot.**

Drs. Robert A. Fischer and Barton J. Gershen were elected to Associate membership at the same meeting.

Obituaries

Herman Eisenberg, M.D.

(1904–1965)

Dr. Herman Eisenberg, pediatrician, died November 20, 1965 at George Washington University Hospital. He lived at 2800 Ellicott Street, N.W.

Dr. Eisenberg was born in Poland, July 27, 1904, to Lieb and Tauba Eisenberg. His mother survives him.

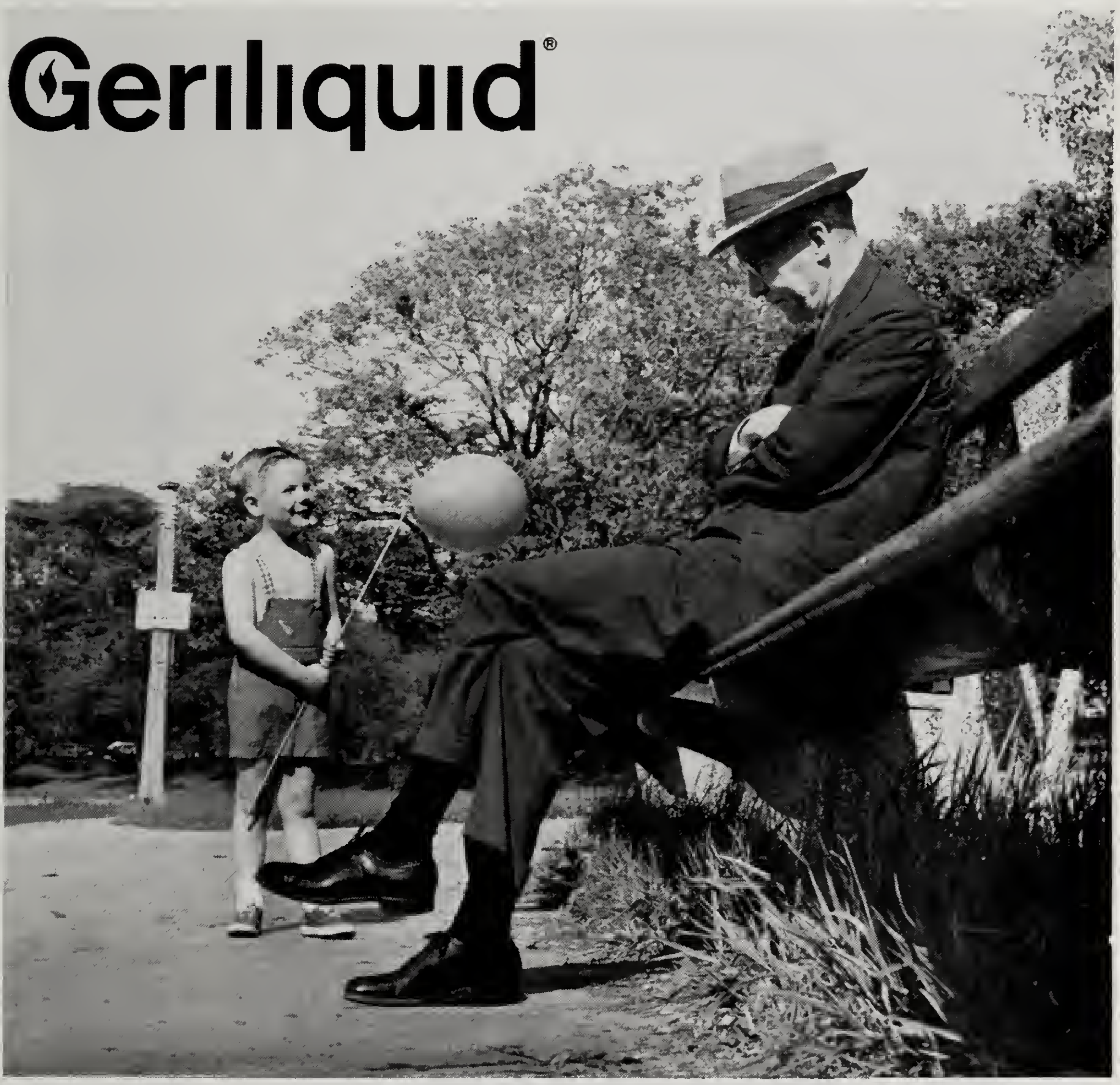
Dr. Eisenberg came to the United States with his family at the age of 17. He attended Eastern High School and George Washington University, graduating from the School of Medicine in 1931. He interned at Providence Hospital the following year and then began his specialty training at Children's Hospital. He served as resident physician for a year and a half, the last 6 months as Chief Resident. Dr. Eisenberg continued on the staff at Children's as Associate Attending until 1944. He was Associate Attending at Providence Hospital from 1934 to 1956 and became Chief of Pediatric Service at Providence in 1957. From 1934 to 1944 he was on the teaching staff of

when even southern sun fails to warm cold hands and feet

provide rapid, sustained vasodilation for warmth and relief of pain, dizziness and faintness in patients with impaired peripheral circulation

GERILIQUID warms cold hands and feet through the thermogenic action of glycine and through sustained vasodilation by glycine and niacin. In addition, in patients with impaired peripheral circulation, GERILIQUID increases the ability to walk farther with less pain. Patients particularly like the palatable, sherry wine base.

Geriliquid®



IN BRIEF: Composition: Each 5 ml. contains: niacin 75 mg. and aminoacetic acid (glycine) 750 mg. in a palatable sherry wine base; alcohol 5%.

Side Effects: Occasional lightheadedness or transient itching which may disappear with continued use. There are no known contraindications; however, caution is advised when there is concomitant administration of a coronary vasodilator.

Administration and Dosage: One or two teaspoonfuls 3 times a day before meals. If flushing is objectionable, dosage may be lowered. However, tolerance to flushing usually develops without loss of efficacy in regard to vasodilation.

Supplied: Bottles of 8 oz. and 16 oz.

LAKESIDE LABORATORIES, INC. Milwaukee, Wisconsin 53201

Surgical Supplies and Equipment

Complete Fitting Service for
Ladies and Men

NELSON KLOMAN SURGICAL SUPPLY CO.
1018 - 18th Street, N.W.
Washington 36, D. C.

***Telephone*: FEderal 8-5245**

Georgetown University School of Medicine as Instructor in Pediatrics.

Dr. Eisenberg was certified by the American Board of Pediatrics. Elected to Active membership in the Medical Society of the District of Columbia in 1935, he transferred to Associate in 1957, and resigned his membership early in 1965. He was a Fellow of the American Academy of Pediatrics, a member of the Medical Society of Prince George's County (Md.), and the Jacobi Medical Society. An ardent golfer, he belonged to the Woodmont Country Club.

He leaves his wife, Mrs. Shirley Kolker Eisenberg, and a daughter, Bonnie, who attends George Washington University. Another daughter, Mrs. Annette E. Stiefbold, lives in New York City. He also leaves 2 brothers, Samuel Eisenberg, of Washington, and Yaakov Eshed Eisenberg, of Israel.

Coleridge Mason Gill, B.S., M.D.

(1909–1965)

Dr. Coleridge M. Gill, who practiced gynecology in Washington for 25 years, died, December 1, 1965 at the New England Baptist Hospital in Boston. He lived at 4813 Blagden Avenue, N.W.

Dr. Gill was born in Haverhill, Mass., September 3, 1909 to the Reverend Coleridge A. Gill and Mrs. Florence Mason Gill, both of whom survive him. He graduated in 1934 from Howard University with a Bachelor of Science degree in chemistry and in 1938 from the College of Medicine. He interned for a year at Freedmen's Hospital and spent a year in residency at the same hospital.

Dr. Gill joined the teaching staff of Howard University in 1942 as Assistant in Pathology. At the time of his death he was Assistant Professor of Obstetrics and Gynecology. He was Chairman of Obstetrics and Gynecology at Hadley Memorial Hospital, Attending in Obstetrics and Gynecology at Freedmen's, and also served on the staffs of Providence and Georgetown University Hospitals and the Southeast Community Hospital at Bowling Green, Md.

Dr. Gill was certified by the American Board of Obstetrics and Gynecology. He was elected to Active membership in the Medical Society of the District of Columbia in 1953. He was a Fellow of the American College of Obstetricians and Gynecologists and a member of the American Committee on Maternal and Infant Care, the Medico-Chirurgical Society of D. C., and the Washington Gynecological Society. He was also a member of the Flying Physicians.

In addition to his parents, Dr. Gill leaves his wife, Mrs. Ethel Greenfield Gill; 3 sons, Coleridge M., Jr., Carlisle, and Cornell; and twin daughters, Juliann and Juliette. He also leaves a brother, Sidney M. Gill, of New York City, and 2 sisters, Mrs. Theresa L. Howard, of Haverhill, Mass., and Mrs. Rachel Crawford, of Boston.

Virilizing Adrenal Tumors in Childhood—Russell et al

(*Continued from page 27*)

4. Turpin, R., and others: Sem. Hop. Paris, 1958, **34**, 210.
5. Zorina, Z. P., and Voronin, A. G.: Pediatriia (Moskva), 1961, **40**, 75.
6. Dobost, C., Blondeau, P., Piwnica, A., and Levy-Lemaihn, S.: J. Chir. (Paris), 1962, **84**, 5.
7. Brugio, G. R.: Pediatria (Napoli), 1964, **72**, 161.
8. Mortimer, J. C.: J. Clin. Endocr., 1964, **24**, 842.
9. Wilkins, L.: The Diagnosis and Treatment of Endocrine Disorders in Childhood and Adolescence, 3rd ed. Springfield, Ill.: Thomas, 1965.
10. Okada, M., Fukushima, D. K., and Gallagher, T. F.: J. Biol. Chem., 1959, **234**, 1688.
11. Goldman, A. S., Bongiovanni, A. M., Yakovac, W. C., and Prader, A.: J. Clin. Endocr., 1964, **74**, 894.
12. Justin-Benjancon, L., and others: Sem. Hop. Paris, 1960, **36**, 737.
13. Arcara, G.: Clin. Pediat. (Bologna), 1963, **45**, 377.
14. Edwards, L. C., and Dunphy, J. E.: New Eng. J. Med., 1958, **259**, 275.
15. Hardy, J. D., and McPhail, J. L.: Amer. J. Surg., 1960, **99**, 443.

WHEN MOTHER'S IRON ISN'T UP TO MOTHERHOOD

IN BRIEF: ACTIONS AND USES: A single dose of Imferon (iron dextran injection) will measurably begin to raise hemoglobin and a complete course of therapy will effectively rebuild iron reserves. The drug is indicated only for specifically-diagnosed cases of iron deficiency anemia and then only when oral administration of iron is ineffective or impractical. Such iron deficiency anemia may include: patients in the last trimester of pregnancy; patients with gastrointestinal disease or those recovering from gastrointestinal surgery; patients with chronic bleeding with continual and extensive iron losses not rapidly replenishable with oral iron; patients intolerant of blood transfusion *as a source of iron;* infants with hypochromic anemia; patients who cannot be relied upon to take oral iron.

COMPOSITION: Imferon (iron dextran injection) is a well-tolerated solution of iron dextran complex providing an equivalent of 50 mg. of elemental iron in each cc. The solution contains 0.9% sodium chloride and has a pH of 5.2-6.0. The 10 cc. vial contains 0.5% phenol as a preservative.

ADMINISTRATION AND DOSAGE: Dosage, based upon body weight and Gm. Hb./100 cc. of blood, ranges from 0.5 cc. in infants to 5.0 cc. in adults, daily, every other day, or weekly. The total iron requirement for the individual patient is readily obtainable from the dosage chart in the package insert. Deep intramuscular injection in the upper outer quadrant of the buttock, using a Z-track technique, (with displacement of the skin laterally prior to injection), insures absorption and will help avoid staining of the skin. A 2-inch needle is recommended for the adult of average size.

SIDE EFFECTS: Local and systemic side effects are few. Staining of the skin may occur. Excessive dosage, beyond the calculated need, may cause hemosiderosis. Although allergic or anaphylactoid reactions are not common, occasional severe reactions have been observed, including three fatal reactions which may have been due to Imferon (iron dextran injection). Urticaria, arthralgia, lymphadenopathy, nausea, headache, and fever have occasionally been reported. Initial test doses of 0.5 cc. are advisable.

PRECAUTIONS: If sensitivity to test doses is manifested, the drug should not be given. Imferon (iron dextran injection) must be administered by deep intramuscular injection only. Inject only in the upper outer quadrant of the buttock, not in the arm or other exposed area.

CONTRAINDICATIONS: Imferon (iron dextran injection) is contraindicated in patients sensitive to iron dextran complex. Since its use is intended for the treatment of iron deficiency anemia only, it is contraindicated in other anemias.

CARCINOGENICITY POTENTIAL: Using relatively massive doses, Imferon (iron dextran injection) has been shown to produce sarcoma in rats, mice and rabbits and possibly in hamsters, but not in guinea pigs. The risk of carcinogenesis, if any in man, following recommended therapy with Imferon (iron dextran injection) appears to be extremely small.

SUPPLIED: 2 cc. ampuls, boxes of 10; 5 cc. ampuls, boxes of 4; 10 cc. multiple dose vials.

in iron deficiency anemia for rapid and predictable replacement of iron reserves

imferon®

(iron dextran injection)

LAKESIDE LABORATORIES, INC. • Milwaukee, Wisconsin 53201

BOOK REVIEWS

Obstetrics, 13th ed. From the original text of Joseph B. DeLee, M.D. J. P. Greenhill, M.D., F.A.C.S., F.I.C.S. (Hon.), F.A.C.O.G. Price, $20.00. Pp. 1246, with 1296 illustrations on 1193 figures, 54 in color. Philadelphia: Saunders, 1965.

This fine obstetrical textbook, originally edited by DeLee, has been revised and reëdited by Greenhill. Although much of the original text and many of the original illustrations have been retained, much new material has been added The standard chapters on Position and Presentation, Forceps, Episiotomy, Caesarean Section and the like are little changed; many new chapters and much new material have been added to bring it up to date with the latest developments in obstetrics.

The first chapter of the book on the Anatomy of Reproduction by Bent G. Boving of the Carnegie Institute has been greatly expanded and is the clearest résumé of the development of the ovum and sperm fertilization, implantation, and the development of the placenta that I have seen in any textbook. It is profusely illustrated with diagrams, photographs, and photomicrographs.

The chapter on the Development of the Placenta and Fetal Membranes by Elizabeth Ramsey is clear, concise and well illustrated and contains much new material, as is the chapter on the Physiology and Biochemistry of the Placenta by Ernest W. Page.

Dr. Emanuel Friedman in the chapter on Analgesia has written an excellent critique of the Reed method and hypnosis. Many of his conclusions as to the amount and type of analgesia for the conduct of labor would find little agreement from obstetricians in this area.

The chapter on Anaesthesia by Dr. Daniel Moore is an excellent résumé of the advantages and disadvantages of the various anesthetic agents for both vaginal delivery and cesarean section.

The chapter on the Powers and Mechanism of Labor by Caldeyro - Barcia and Juan Poseiro is a résumé of their tocographic studies on normal and abnormal labors, and is profusely illustrated by graphs and diagrams.

New chapters have been added on Asherman syndrome, human cytogenetics, and contraception. Additional material has been added to many of the other chapters.

Perhaps the only criticism of this text is that some of the standard chapters should be up-dated. The chapter on Episiotomy still illustrates the mediolateral, although most obstetricians now use the median.

The chapter on Analgesia does not reflect the increased use of barbiturates, particularly intravenous barbiturates, that have become increasingly more prevalent, especially in this area.

This is still one of the 2 great American textbooks in obstetrics, and should be a part of every obstetrician's library.

Morton S. Kaufman, M.D.

Hallux Valgus, Allied Deformities of the Forefoot and Metatarsalgia. H. Kelikian, M.D. Price, $19.50. Pp. 503, illustrated. Philadelphia: Saunders, 1965.

This profusely illustrated monograph provides the orthopedic specialist with an encyclopedic coverage of structural, postural and dynamic problems of the forefoot. The author includes an extensive review of the literature to bring to the reader an outline of trends in treatment as they developed.

The author's favorite procedures receive a more elaborate discussion, but the many surgical approaches to the problems of bunion, metatarsalgia, interdigital neuroma, and postural affectations are adequately covered. The illustrations include photographs of the feet accompanied by appropriate X-rays. These clear figures greatly enhance the line drawings which illustrate the operative techniques.

The great mass of anatomic and biomechanical details will be most useful to the orthopedic surgeon. However, any practitioner who sees a fair number of foot problems in his office will find this book a well organized guide to the information he seeks.

Robert G. Kindred, M.D.

From Auscultation to Phonocardiography. Aldo A. Luisada, M.D., with the collaboration of D. M. MacCanon, Ph.D., L. M. Rosa, M.D., P. M. Shah, M.D., and R. Zalter, M.D. Price, $17.75. Pp. 351, with 196 illustrations. St. Louis: Mosby, 1965.

My own reprint file, like that of many physicians not in full-time academic medicine, is composed of articles which had the twin virtues of being interesting—at the time—and available—at the time. Ripped desperately from that ever-growing stack of New England Journals or "respectfully requested" via postcard or smudgily-reproduced on the office copier, they make no pretense to completeness. Yet, faced with Dr. Luisada's imposing volume, I thumbed through my folders labeled "Murmurs," "Sounds," "Aortic valve," and "RHD," and came to the conclusion that either Dr. Luisada is missing a great deal or I am.

It is an imposing book and in many respects an excellent one. Its prime virtue lies in 196 excellent illustrations, most of them actual phonocardiograms at 75 mm. paper speed, clearly reproduced and clearly labeled. Several concise pressure-pulse diagrams are included. The text is well written and free from internal ambiguities. Chapters devoted to some of the more esoteric phenomena in auscultation will be of value to both the researcher and the clinician. Thus, there are interesting and well-documented pages on heart sounds in other mammals, functional tests (amyl nitrite, etc.), and the duration of heart sounds and intervals (of great value to the beginner about to measure his first II-OS interval and unable to decide where the second

(Continued on page 36)

the price of "success"

190

102

Hypertension has been called the price of success...and in some life-situations, the cost of failure. In either event, Metatensin lowers blood pressure, cushions the patient against stress and retards the progress of disease. Metatensin is effective and economical. It is well-tolerated over long periods.

THERAPY
YOU CAN STAY
WITH

METATENSIN®

EACH SCORED TABLET CONTAINS:
Metahydrin® (trichlormethiazide) 2 mg. or 4 mg. Reserpine 0.1 mg.

In Brief: Patients with hepatic cirrhosis or diarrheal syndromes, or under therapy with digitalis, ACTH, or potassium-losing steroids, should be observed for signs of hypokalemia. With thiazides, electrolyte depletion, diabetes, gout, granulopenia, nausea, pancreatitis, cholestatic jaundice, flushing, mild muscle cramps, constipation, photosensitivity, acute myopia, perimacular edema, paresthesias, neonatal bone marrow depression in infants of mothers who received thiazides during pregnancy, skin rash or purpura with or without thrombocytopenia, may occur. With reserpine, untoward effects may include depression, peptic ulcer and bronchial asthma. Withdraw medication at least 7 days prior to electroshock therapy, 2 weeks prior to elective surgery. Contraindications are complete renal shutdown, rising azotemia or development of hyperkalemia or acidosis in severe renal disease.
Supplied: Metatensin tablets, 2 mg., 4 mg. — bottles of 100 and 1000.

LAKESIDE LABORATORIES, INC. Milwaukee, Wisconsin 53201

Book Reviews

(*Continued from page 34*)

sound begins). The book is buttressed with some 800 references up to and including the year 1964.

There are some major faults in the book, however, and some of them may be diagnosed by a quick look at the Preface and Introduction, sections which are of tradition read only by reviewers and the author's hopeful associates. Nowhere does Dr. Luisada mention any specific aim in compiling this text other than the hope that it will "contribute to the training of physicians and to the enrichment of their knowledge." Which physicians? Which knowledge? A text, unlike a novel, cannot hope for universal acceptance, but it should aim a specific body of knowledge at a specific audience. It cannot be both an introduction and an encyclopedia.

Dr. Luisada's book suffers from this indefinite purpose. One would not complain about the brief 8 pages in the chapter on Complex Congenital Malformations were not 21 pages—the book's longest chapter—devoted to Normal Cardiac Cycle Studied in Various Frequency Bands. Why 17 pages on the electronics of sound-reproducing devices and only 3 on The Mechanism of Cardiovascular Murmurs, in which all of the controversy and experimentation centering on the subject is treated with almost indecent haste, the reader finally being urged to "consult Allen and Mustian for further discussions on the origin of murmurs."

This malemphasis, however, is minor compared to actual omission or misstatement. Aortographic studies from 1961 on, for example, have indicated that the parasternal blowing diastolic murmur often heard in patients with mitral stenosis is due not to pulmonary hypertension and consequent pulmonic valve insufficiency ("Graham Steell murmur") but to slight aortic insufficiency. Luisada lists this work of Runco and Brest in his bibliography, but the student who looks up the discussions of mitral stenosis, aortic insufficiency, or "Graham Steell murmur" will find no mention of this work in the text itself. The discredited origin of the murmur is perpetuated. Similarly, although Aygen and Braunwald in their 1962 *Circulation* article indicated that simple overfilling of the right ventricle could not adequately explain the fixed, wide split in atrial septal defect, Luisada in his text twice cites this simplistic explanation, mentions no complexities or alternative theories, and yet lists the 1962 article in his bibliography.

There is no discussion of the correlation between murmur and degree of severity in pulmonic stenosis or congenital aortic stenosis. Although I believe this correlation has been overemphasized by some phonocardiographers, it nevertheless deserves some mention in a text of this magnitude. Surawicz's cases of silent mitral stenosis are not mentioned, the "straight back syndrome" is nowhere indexed, and relative mitral insufficiency is still attributed to dilatation of the experimentally inflexible mitral ring.

In short, there is a great deal here—but not everything. It is neither encyclopedic nor basic. It has the most up-to-date bibliography and the best illustrations of any book on the subject. Buy it if you're in the field, but, just the same, hang on to your own reprints and don't let your wife toss out those New England Journals quite yet.

Michael J. Halberstam, M.D.

Physiologic Foundations for Marriage Counseling. Joseph B. Trainer, M.D. Price, $8.00. Pp. 287. St. Louis: Mosby, 1965.

Dr. Trainer is an Associate Professor of Physiology and Medicine at the University of Oregon Medical School. He has enjoyed teaching endocrine and reproductive physiology to medical and nursing students for the past 15 years. A sizable number of students' wives are his patients. The author hopes this book will "fill a void in the education of doctors and nurses" and will "provide solid information on the biology and medicine of sex, marriage, and reproduction." In so far as the author confines himself to physiology and medicine the book may prove useful as a synoptic review for medical students and interns or as a refresher for general practitioners. The presentation is sketchy, but the style is lively, lucid, and makes for easy refresher or review reading. Personalized evaluations of each of the references at the close of each of the 20 brief chapters facilitate supplementary reading.

The book's title is misleading inasmuch as more than half of its content consists of the author's homespun and common sense management of premarital and marital problems; e.g., "Smile deliberately at the next 5 people you meet . . . " or "man is the best medicine for man." Dr. Trainer feels that the already overburdened psychiatrist should not be referred any marital problem "having an evident common sense solution." The psychiatrist would agree but would question the implied high frequency of such problems and the effectiveness of "common sense" solutions which rely heavily on the findings of Kinsey, Popenoe, and others of this category and which further imply that knowledge of endocrine and reproductive physiology can frequently and magically modify even superficial interpersonal and intrapersonal conflict.

The author's enthusiasm for his own counseling techniques as well as for those of nurses, psychologists, and physicians is part of the current "psychologization" of medicine. It dangerously obscures the painstaking therapy, training, and supervising that must be provided by experienced psychotherapists to those nonpsychiatrists who wish to become qualified marital counselors.

The author candidly and accurately anticipates his reviewer in the opening sentences of his Preface: "This is a textbook, even if it may be hard to recognize it as such. It has a completely uneven pace from impersonal science to close personal experience. It ranges from the minutiae of individual intimacy to the grosser impact of cultural history. It is sometimes impartial, sometimes

(*Continued on page 38*)

approximating the diuretic efficacy of meralluride

METAHYDRIN®
(trichlormethiazide)

To determine the relative efficacy of thiazide diuretics in congestive heart failure, Metahydrin (trichlormethiazide) and three other thiazides were measured against Mercuhydrin® (meralluride injection)—the standard diuretic. "The results leave little doubt that the diuretic efficacy, that is, the 'ceiling effect' in these terms, is not the same for different thiazides."* The assays ranged from about 40% of the effectiveness of Mercuhydrin through 67%, 77% to 90% for Metahydrin. The latter two values were thought to be significantly different from the lowest value and to be therapeutically important.

*Gold, H., *et al*: Closed Panel Conference: Present Status of the Management of Congestive Failure and Advances in Diuretic Therapy, Journal of New Drugs, 1:177, July-August, 1961.

LAKESIDE LABORATORIES, INC.
Milwaukee, Wisconsin 53201

IN BRIEF: ADMINISTRATION AND DOSAGE: One 2 mg. or 4 mg. tablet once or twice daily. In acute, severe decompensation, Mercuhydrin® (meralluride injection) may be necessary initially.

PRECAUTIONS: As with all effective diuretics, vigorous therapy may produce electrolyte depletion. Patients with severely reduced renal function should be observed carefully since thiazides may be contraindicated. Care should be taken with patients predisposed to diabetes or gout. Patients with a tendency to potassium deficiency, as in hepatic cirrhosis or diarrheal syndromes, or those under therapy with digitalis, ACTH, or certain adrenal steroids, also should be watched carefully.

SIDE EFFECTS: Nausea, flushing, constipation, skin rash, muscle cramps and gastric discomfort have been occasionally noted; rarely thrombocytopenia and bone marrow depression, photosensitivity, cholestatic jaundice, pancreatitis, perimacular edema, gout and diabetes have been caused by administration of thiazides.

CONTRAINDICATIONS: Complete renal shutdown; rising azotemia or development of hyperkalemia or acidosis in severe renal disease; demonstrated hypersensitivity.

HOW SUPPLIED: Bottles of 100 and 1000 tablets.

Book Reviews

(*Continued from page 36*)

opinionated, frequently irreverent. It brings together many things, nearly all of which are individually better treated by others."

Daniel Prager, M.D.

Treatment of Juvenile Diabetes Mellitus. Howard S. Traisman, M.D., and Alvah L. Newcomb, M.D. Price, $12.75. Pp. 147, with 16 figures, including 1 color plate. St. Louis: Mosby, 1965.

This small (147-page) book can best be described as a manual and at $12.75 it is probably the most expensive manual ever published. The book is thorough. A listing of chapter headings shows this quite well: Epidemiology and Etiology, Diagnosis, Treatment of Diabetic Acidosis, and Six-hour Management. There is a chapter discussing the various insulins complete with graphs showing the onset of activity and its duration. There is a discussion concerning parental instruction, diabetes mellitus in infancy, its prognosis, and a chapter on the pregnant diabetic and the infant of the diabetic mother. There are 4 appendices: nursing care, collection of urine specimens, nurse's instruction to the parent of the diabetic child, and fluid and electrolyte therapy.

Despite all this attention to detail there is something unsatisfactory about the book. Sentences are simple and declarative. There is a multitude of pictures, drawings and graphs. A color chart of a patient's record of urine tests fills a page; there are pictures of vials of insulin of all types; and illustrative sketches for the diabetic patient on the technique of injection are included. These belong in a patient instruction pamphlet, not in a book for physicians. Though packed with facts and a ready reference for those who need it, there is too much directed to the laity and yet also too much directed to the physician for this book to be made available to the laity. Do we need a picture in a book designed for physicians of a dietary scale?

The authors fall short of what I presume they tried to do. The book is quite small and quite expensive and if one deletes the pages devoted to trivia the problem is compounded.

Ralph Stiller, M.D.

Applied Hypnosis and Positive Suggestion in Medicine, Dentistry, and Patient Care. George A. Ulett, B.A., M.S., M.D., Ph.D., and Donald B. Peterson, M.D. Price, $8.50. Pp. 134. St. Louis: Mosby, 1965.

Few physicians routinely use hypnosis in treating their patients and there certainly is no good reason why they should. Many, of course, effectively use suggestion in one form or another. Undoubtedly, many more could improve their therapeutic relationships with patients by more frequent and more deliberate use of suggestion.

The authors of this short book have placed due stress on suggestion as a therapeutic tool. Moreover, they have given a readable and sensible approach to the entire subject of hypnosis, providing a necessary background to the understanding of suggestive therapeutics.

Every physician should be aware of the power of suggestion, and for this purpose the book can be highly recommended. Furthermore, the physician tempted to enroll in one of the seemingly popular short courses in hypnosis should most certainly read a book such as this one first. Perhaps he could then know at least who is hypnotizing whom.

George D. Weickhardt, M.D.

Textbook of Obstetrics. John C. Ullery, M.D., Zeph J. R. Hollenbeck, M.D., and 31 contributors. Foreword by Richard L. Meiling, M.D. Price, $17.50. Pp. 752, with 292 figures and 3 color plates. St. Louis: Mosby, 1965.

This should be a very welcomed book by medical students as well as practitioners in obstetrics. The authors have very successfully used the many members of the obstetric and gynecologic staff at Ohio State University, as well as successfully crossing departmental boundaries, to obtain appropriate authors in bringing us a new and very needed textbook in obstetrics. Dr. Ullery and Dr. Hollenbeck should be congratulated on their fine planning and editing, in that they have avoided the many pitfalls and duplications usually seen in books with multiple contributors, and in doing so they have given us an excellent reference and textbook on obstetrics.

The arrangement of the book is very orderly, therefore making for easy reference and study. The book has been organized into 3 parts.

Part I. The Conduct of Pregnancy. This part is very concise, starting with the endocrinology of the pituitary-ovarian-endometrial cycle (with fine illustrations and charts), through all the medical and surgical complications seen in a busy practice.

Part II. The Conduct of Labor and Delivery. This division very adequately gives the student of obstetrics a clear understanding of the mechanics and the physiology of labor and delivery. It covers the normal and abnormal problems very well and includes the necessary information in regard to the immediate care of the newborn.

Part III. The Conduct of the Puerperium. This section, though rather brief, covers the subject matter very well. The chapter on Maternal Mortality is excellent and is based largely on the fine experience and background of the Franklin County and the Ohio State Maternal Health Committees.

Faults can be found in any textbook but there are few in this book. Students will probably complain that many of the procedures described are different from those seen in their hospital training programs. This is admitted by the authors in the Preface where they explain that there has been no attempt to make the coverage all-inclusive. The specific methodology in most cases is that used very successfully in their environment at

(*Continued on page 42*)

a rapid lift from the hell of depression

**often relieves
mental pain
in 2-5 days**

Doré Illustration
from
Dante's Inferno

NORPRAMIN®
(desipramine hydrochloride)

Norpramin is a rapid-acting specific drug for the treatment of depression. Depressive signs and symptoms—sometimes described as "mental pain"—typically begin to improve in 2-5 days. Patients are more hopeful, less empty and less weighed down by their troubles. Norpramin has only slight sedative qualities, nevertheless anxiety *secondary to depression* is frequently relieved as depression is lifted. If anxiety or tension persists it can be controlled by adding a tranquilizer or by reducing dosage. Norpramin is not a MAO inhibitor. Side effects are usually mild.

DOSAGE AND ADMINISTRATION

Optimal results are obtained at a dosage of about 150 mg./day—two 25 mg. tablets t.i.d. After achieving optimal results, a maintenance dose (50-100 mg./day) should be sought.

LAKESIDE LABORATORIES, INC. Milwaukee, Wisconsin 53201

IN BRIEF:

Indications: In depression of any kind—neurotic and psychotic depressive reactions; manic-depressive or involutional psychotic reactions.

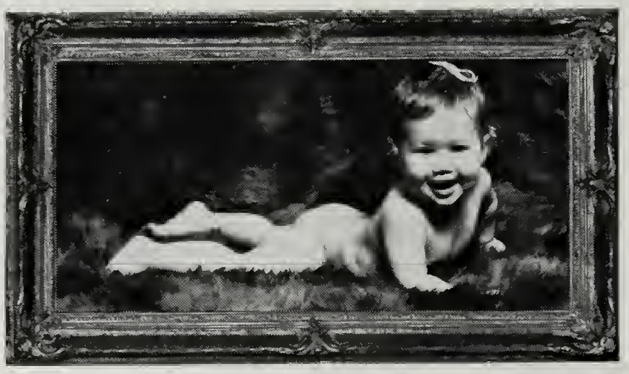
Contraindications and Precautions: Glaucoma, urethral or ureteral spasm, recent myocardial infarction, severe coronary heart disease and epilepsy. Should not be given within two weeks of treatment with a monoamine oxidase inhibitor. Safety in human pregnancy has not been established.

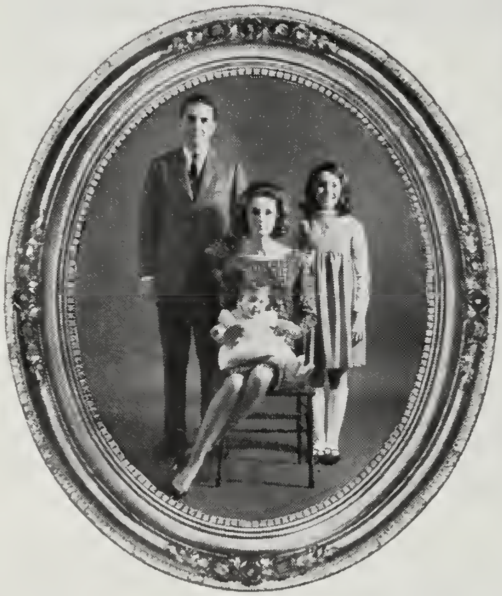
Adverse Effects: Side effects, usually mild, may include: dry mouth, constipation, dizziness, palpitation, delayed urination, "bad taste," sensory illusion, tinnitus, agitation and stimulation, sweating, drowsiness, headache, orthostatic hypotension, flushing, nausea, cramps, weakness, blurred vision and mydriasis, rash, allergy, transient eosinophilia, granulopenia, altered liver function, ataxia and extrapyramidal signs.

Supplied: Norpramin (desipramine hydrochloride) tablets of 25 mg., in bottles of 50, 500 and 1000.

Turn a bundle of colic

into a bundle of joy





COLIC, often in part a reflection of family tension, adds sleepless nights to patients' and parents' distraught days. Pediatric Piptal with Phenobarbital slows down spasm, diminishes pain and crying, improves feeding patterns . . . permits sleep and rest . . . for patient and family.

Pleasant tasting Pediatric Piptal with Phenobarbital is miscible in milk, formulas and fruit juices, and may also be administered by dropper directly on the infant's tongue. Dosage is 0.5 cc. 15 minutes before feeding; in severe cases, 1.0 cc. four times daily. High doses may occasionally cause constipation with tenesmus and, rarely, flushing without fever. Contraindicated in bowel obstruction or sensitivity to phenobarbital or anticholinergics. Available in 30 cc. dropper bottles, droppers calibrated to deliver 0.5 cc.

PEDIATRIC PIPTAL®
WITH PHENOBARBITAL

each cc. contains: 6 mg. phenobarbital (warning: may be habit forming); 4 mg. Piptal® (pipenzolate bromide), and 20% alcohol in a pleasant-tasting solution.

LAKESIDE LABORATORIES, INC.
Milwaukee, Wisconsin 53201

duodenal ulcer

Prompt relief of pain and spasm in functional g.i. distress...

PIPTAL® (pipenzolate bromide) efficiently suppresses acid secretion and motility . . . relieves pain and spasm of peptic ulcer. Despite its potent gastrointestinal effects, "its clinically effective therapeutic dose is well below that required to produce side reactions."[1] Because urinary retention is rarely a problem, PIPTAL (pipenzolate bromide) is "a highly desirable drug in the treatment of peptic ulcer in older patients . . ."[2] Tolerance to PIPTAL (pipenzolate bromide) has not been demonstrated, and the drug may be administered over prolonged periods without loss of efficacy. *PIPTAL-PHB is specifically designed for the tense ulcer patient who will benefit from the sedative effect of phenobarbital.*

1—Pomeranze, J., and Gadek, R.J.: Am. Pract. & Digest Treat. *8*:73-77 (Jan.) 1957
2—Asher, L.M.: Am. J. Digestive Diseases *4*:272 (Apr.) 1959

gastric ulcer

PIPTAL®
(pipenzolate bromide)

PIPTAL®-PHB
(phenobarbital, 16 mg., pipenzolate bromide, 5 mg.)

IN BRIEF: PIPTAL—Each tablet contains 5 mg. pipenzolate bromide, PIPTAL-PHB—Each tablet (or 5 cc. of elixir) contains phenobarbital (warning: may be habit forming) 16.0 mg., Piptal (pipenzolate bromide) 5 mg. The elixir contains alcohol 20%.

Side Effects: Dry mouth, blurring of vision or drowsiness may occur.

Contraindications: Withhold in glaucoma, bladder or g.i. obstruction, cardiac arrhythmias and in sensitivity to anticholinergics or phenobarbital (Piptal-PHB). Caution should be observed in patients with prostatic hypertrophy.

Administration and Dosage: PIPTAL or PIPTAL-PHB Tablets: One tablet three times a day before meals and one or two tablets at bedtime. (PIPTAL-PHB Elixir: One teaspoonful three or four times daily for adults and children over six years of age.)

Supplied: PIPTAL (pipenzolate bromide) 5.0 mg. Tablets—bottles of 100. PIPTAL-PHB Tablets—bottles of 100. PIPTAL-PHB Elixir—bottles of 8 fluid ounces.

LAKESIDE LABORATORIES, INC. Milwaukee, Wisconsin 53201

Book Reviews

(*Continued from page 38*)

Ohio State University. These can well be used elsewhere with success, or changed and/or modified in other schools or environments of practice. Their methods will serve as good guidelines in the teaching and practice of obstetrics anywhere.

The principal fault I find is with the chapter on Fetal Abnormalities. The content is excellent and should be found useful. The chart showing the time table of human development should be very useful in relating diseases and medications to developmental defects. The major fault lies in the absence of any references to genetics and fetal development. Some discussion of recent research in cytogenetics (chromosomes) being done today should be included. These studies have already explained some of the genetic errors that occur with the resulting human developmental anomalies seen. Students in the study of human reproduction should be introduced to this new field of study and become cognizant of its importance in the future practice of obstetrics.

Garth L. Jarvis, M.D.

Ciba Foundation Symposium: Caries-Resistant Teeth. G. E. W. Wolstenholme, O.B.E., F.R.C.P., F.I.Biol., and Maeve O'Connor, B.A., Editors. Price, $12.50. Pp. 338, with 43 illustrations. Boston: Little, 1965.

The demonstration of caries-resistant teeth is complicated by (1) the necessity to show that the environment is cariogenic and (2) by the clinical difficulties of demonstrating that caries has not occurred even at a subclinical level in the so-called resistant teeth.

Evidence is consistent with the hypothesis that the resistance of teeth can be modified post-eruptively by exposure to saliva, food, and water. The most sensitive epidemiologic index of resistance is the prevalence of caries on the smooth buccal and lingual surfaces.

Grainger, Paynter and Shaw (1959) cite evidence from epidemiologic studies that a much closer prediction of caries-susceptibility is possible by combining available information on such factors as fluoride history, lactobacillus count, and tooth size than is possible by any single prediction. The question unanswered remains: Is a caries-free tooth resistant or has it not yet been challenged?

Accumulating evidence indicates that there is a genetic component which is expressed by as yet unknown means but which, nevertheless, governs the total caries attack within the individual mouth. The clinical picture of this genetic influence is modified by environmental factors.

To evaluate caries resistance in experimental animals one must analyze data in the light of complex interacting genetic, nutritional, endocrine, dietary, bacterial, salivary, and functional factors involved in the carious process.

Caries resistance can to some extent be related to the chemical composition of the enamel. Two factors seem to be operative here: (1) The surface enamel is more resistant to the caries process, and (2) the replacement of the hydroxy apatite by the caries-inhibiting fluorapatite.

The old concept that caries resistance is associated with well calcified teeth has not been substantiated. It has even been shown that hypomineralized and hypoplastic enamel is no more caries-prone than well calcified enamel (i.e., amelogenesis imperfecta). There is no accurate description of the ultrastructure of caries-resistant teeth.

The dental plaque and its relationship to caries resistance in teeth has not been fully evaluated. The pH of plaques from various areas of the caries-prone mouth must be studied to correlate the results obtained from caries-free and caries-prone mouths in general.

Trace elements may act on the teeth in the following ways:

1. By direct effect (enzymatic)
2. By direct incorporation chemically in the hard dental tissues
3. By changing the environment of the tooth
4. By direct action on growth and reproduction of caries-producing organisms
5. By facilitating the absorption, excretion or retention of proven caries-preventing nutrients.

There is little evidence to indicate the role played by individual elements.

The correlation between acid-forming organisms and caries has been expounded since 1922. To determine their role in caries formation their interaction with the dental plaque must be evaluated.

Experiments indicate teeth undergo a period of maturation post-eruptively which is influenced by the action of saliva.

It is the effect of dietary and environmental factors upon the secretions of the microflora on the tooth surface that is of importance in the carious process.

It is felt that there is indeed evidence of such an entity as a caries-resistant tooth. The evidence at present is inadequate. The following facts point in the direction:

1. The action of fluorides can lead to a more perfect crystalline structure.

2. The solubility rate of enamel is reduced by diffusion barriers on the tooth surface.

3. Calcium and phosphate ions in the saliva reduce solubility.

4. Precipitated salivary mucin retards dissolution of enamel.

5. The bacterial plaque is in part influenced metabolically by dissolved agents from the enamel.

It will be in these areas that future investigations will be conducted to determine whether or not there are caries-resistant teeth.

This text is intended to open the eyes of the students of dentistry and medicine to the vast unknown that confront us today.

Robert E. Smith, Jr., D.D.S.

Announcing

EUTRON™

pargyline hydrochloride 25 mg. and methyclothiazide 5 mg.

for control of
moderate to severe
hypertension

Unique combination produces greater antihypertensive effect with lower doses

Eutron is the combination in a single tablet of 25 mg. Eutonyl (pargyline hydrochloride) and 5 mg. Enduron (methyclothiazide). This combination produces greater therapeutic effect than that of either component used alone. Side effects may be milder, too, as dosages are generally lower. The effective dosage is usually one tablet, once daily. Tablets are scored for greater dosage flexibility.

100 No 6878
Filmtab®
EUTONYL™
25 PARGYLINE HYDRO CHLORIDE
Caution Federal (U.S.A.) law prohibits dispensing without prescription
100 No. 6812
Tablets (Grooved)
ENDURON™
METHYCLO-THIAZIDE
Caution Federal (U.S.A.) law prohibits dispensing without prescription

Each Eutron tablet contains two proven antihypertensives in the ratio shown to be most effective in most patients.

TM—TRADEMARK

New **EUTRON**
extends your range
of treatment in
moderate to severe
hypertension

A single product
you can use even
in the presence
of congestive heart
failure or edema

Eight out of 10 patients respond

In clinical trials, Eutron produced normotension or a significant reduction in blood pressure in eight out of 10 patients studied. The rationale for the product is this: Eutonyl used alone is a potent antihypertensive. Its antihypertensive action is markedly enhanced by Enduron, a potassium-sparing thiazide.[1,2,3] The combination (Eutron) thus produces greater antihypertensive effect with lower dosages of the Eutonyl component, and milder side effects may be seen.

512214

1. Torosdag, S., Schvartz, N., Fletcher, L., Fertig, H., Schwartz, M. S., Quan, R. F. B., and Bryant, J. M., Pargyline Hydrochloride as an Antihypertensive Agent With and Without A Thiazide, Am. J. Cardiol., 12:822, Dec., 1963.

2. Pollack, P. J., Pargyline Hydrochloride and Methyclothiazide Combined In The Treatment of Hypertension, Cur. Thera. Res., 7:10, Jan., 1965.

3. Bryant, J. M. et al., Antihypertensive Properties of Pargyline Hydrochloride, New Non-Hydrazine Monoamine Oxidase Inhibitor Compared with Sulphonamide Diuretics, J.A.M.A., 178; 406, Oct., 1961.

BP reductions in the recumbent and sitting positions often are nearly as great as in the standing. In clinical trials, the average *recumbent* BP reduction was 36/18 mm. Hg.

The average *standing* reduction in clinical trials was 45/22 mm. Hg. Thus the difference between the standing and recumbent readings was only 9/4 mm. Hg.

Significantly lowers blood pressure in all body positions; less likelihood of orthostatic hypotension

In clinical trials, the average reduction in standing blood pressure was 45/22 mm. Hg.; in the sitting position it was 48/20 mm. Hg.; and in the recumbent position, 36/18 mm. Hg.

Because Eutron effectively reduces blood pressure in all body positions, there is reduced likelihood of orthostatic symptoms or hypotension.

This was reflected in the relatively mild character of side effects seen in clinical trials (see below).

Smooth and gradual onset

Onset of antihypertensive action is usually quite smooth. Initial reduction of systolic and diastolic readings is usually seen within a week — maximum reduction in seven to ten days.

Less troublesome side effects may be seen; frequent improvement in "sense of well-being"

Fewer than 1% of patients studied discontinued Eutron therapy because of side effects. This is due in part to the relatively low dosage needed with the combination. Usual recommended dose is one tablet daily—that is, 25 mg. Eutonyl with 5 mg. Enduron. *This is about half the usual therapeutic dose of Eutonyl given alone.* As a consequence side effects may be milder. And, as with Eutonyl given alone, the patient may well note an increased sense of well being. This is in distinct contrast to most other antihypertensive therapy.

ABBOTT

Prescribing information for **EUTRON**

INDICATIONS: Eutron (pargyline hydrochloride and methyclothiazide) is indicated in the treatment of patients with moderate to severe hypertension, especially those with severe diastolic hypertension. It is not recommended for use in patients with mild or labile hypertension amenable to therapy with sedatives and/or thiazide diuretics alone.

CONTRAINDICATIONS: Eutron is contraindicated in patients with pheochromocytoma, advanced renal disease, paranoid schizophrenia and hyperthyroidism. Until further experience is gained it cannot be recommended for use in patients with malignant hypertension, children (under 12 years of age), or pregnant patients.

The concomitant use of the following is contraindicated: other monoamine oxidase inhibitors; parenteral forms of reserpine or guanethidine; sympathomimetic drugs; foods high in tyramine such as cheese; imipramine and amitriptyline, or similar antidepressants; methyldopa. A drug-free interval of two weeks should separate therapy and use of these agents.

WARNINGS: Pargyline hydrochloride is a monoamine oxidase inhibitor. Patients should be warned against eating cheese, and using alcohol, proprietary drugs or other medication without the knowledge of the physician. When it is necessary to administer alcohol, narcotics (notably meperidine), antihistamines, anesthetics, barbiturates and other hypnotics, sedatives, tranquilizers, or caffeine, these agents can be used cautiously at a dosage of ¼ to ⅕ the usual amount. Avoid parenteral administration where possible. Withdraw pargyline two weeks before elective surgery.

Patients should be warned about the possibility of postural orthostatic hypotension. Those with angina or other evidence of coronary disease should not increase physical activity. Pargyline may lower blood sugar. Potassium depletion is unlikely at the recommended dosage, but if it occurs, adjust dosage or withdraw or provide added natural food sources of potassium; potassium tablets should be avoided wherever possible, as bleeding or obstructive ulceration of the small bowel has been associated with their use; potassium levels should be especially watched if the patient is on digitalis or steroids, or if hepatic coma is impending.

PRECAUTIONS: When determining the antihypertensive effect of Eutron, blood pressure should be measured while the patient is *standing*. Use with caution in hyperactive or hyperexcitable persons. Such persons may show increased restlessness and agitation. Withdraw drug during acute febrile illness. Watch patients with impaired renal function for increasing drug effects or elevation of BUN and other evidence of progressive renal failure; withdraw drug if such alterations persist and progress. Pargyline has not been shown to cause damage to body organs or systems. As with all new drugs, complete blood counts, urinalyses, and liver function tests should be performed periodically. The drug should be used with caution in patients with liver dysfunction. With prolonged therapy, examine patients for change in color perception, visual fields, and fundi.

Elevated blood urea nitrogen, serum uric acid or blood sugar are possibilities attributable to the methyclothiazide in Eutron. Methyclothiazide may also reduce arterial response to pressor amines. Blood dyscrasias, including thrombocytopemia with purpura, agranulocytosis and aplastic anemia, have been seen with thiazide drugs.

SIDE EFFECTS: The use of pargyline may be associated with orthostatic hypotension. Mild constipation, slight edema, dry mouth, sweating, increased appetite, arthralgia, nausea and vomiting, headache, insomnia, difficulty in micturition, nightmares, impotence, delayed ejaculation, rash, and purpura have been encountered with pargyline. Hyperexcitability, increased neuromuscular activity (muscle twitching) and other extra-pyramidal symptoms have been reported. Drug fever is extremely rare. Congestive heart failure has been reported in a few patients with reduced cardiac reserve. Nocturia has been observed with the combination. If side effects persist, despite symptomatic therapy or reduction of the dose, discontinue the drug.

ABBOTT

512214

FINANCIAL SERVICES FOR PHYSICIANS

Complete Programs of Life Insurance,
Non-Cancellable Disability Income and Mutual Funds

Keogh Pension and Profit-sharing Plans

EUGENE F. ROESSER, C. L. U.

1130 SEVENTEENTH STREET, N.W.
WASHINGTON, D.C. 20036

DISTRICT 7-1114

In the Chevy Chase Area
FOR THE BEST IN DRUGS AND SERVICE
IT'S
HIGGER'S
ESTABLISHED 1930

Complete Biological Stocks
HIGGER'S DRUGS, INC.
5015-17-19 Connecticut Avenue
Phone: Woodley 6-1815
Note: Special physicians' phone to Prescription Department: Woodley 6-5555

THE GIBSON COMPANY
60 years serving the medical profession

922 19th Street, N.W.
Federal 8-2688

Medical and Surgical Supplies
Hospital, Invalid and Sickroom Supplies
Surgical Fitting Specialists—Man and Woman
Private Fitting Rooms

OXYGEN
24-HOUR SERVICE
363–9595

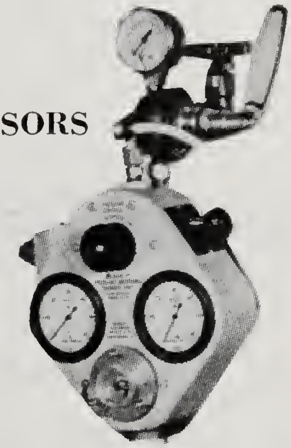
IPPB

COMPRESSORS

OXYGEN

SALES

RENTALS



Inhalation Therapist on Duty
EM 3–9595

ACCREDITED SURGICAL CO.
Medical and Surgical Supplies
3226 Wisconsin Ave., N.W.

Serving the Doctors of Metropolitan Washington
Since 1942

PROFESSIONAL BUSINESS MANAGEMENT, INC.

John C. Post, *President*

A Personal Service Designed to Assist the Doctor with the Business Side of Medical Practice.

• *Medical Management Specialists* •

1012 20th Street, N.W Washington, D.C. 20036 Tel. FEderal 8-3200

CLASSIFIED ADVERTISEMENTS

Advertisements under the following headings are charged at the rate of $5.00 for one insertion of 50 words or less; $4.00 each for three insertions; and $3.00 each for six insertions or more. All advertisements are payable in advance; the Editorial Board reserves the right to edit copy. Closing date for new copy, 15th of month preceding date of issue.

Classified advertisements of a professional nature are free to members.

SITUATIONS WANTED

OTOLARYNGOLOGIST, Board-certified, age 31, recent graduate of approved residency program, seeks association with established otolaryngologist in D. C. or vicinity. Interested in microötology, facial plastics. Will complete 2-year obligation in armed services, July 1966. Address Box 27, 2007 Eye Street, N. W., Washington, D. C. 20006.

PHYSICIAN, licensed in D.C., desires to associate with busy GP part-time. Address Box 10, 2007 Eye Street, N.W., Washington, D.C. 20006.

PHYSICIANS WANTED

GP OR INTERNIST to assist with busy practice beginning July 1 and share fully equipped office on fee-for-service basis. No investment required. Address Box 42, 2007 Eye Street, N.W., Washington, D.C. 20006.

REAL ESTATE

FOR SALE: Doctor's combined home-office, large corner lot, Northwest Washington. Office wing, over 1300 sq. ft., includes reception room, consultation room, nurse's area, 5 treatment rooms, X-ray room, laboratory, bath; separate entrance. Custom-built stone and brick rambler, air-conditioned. Detached 2-car garage. Address Box 58, 2007 Eye Street, N.W., Washington, D.C. 20006.

OFFICE SPACE AVAILABLE

FOR RENT: Office space ideally located at corner of 5500 Colorado Avenue, N.W. Approximately 1,200 sq. ft., newly remodeled, divided into 3 offices with each containing reception room, office, consultation and examining rooms. Air-conditioned. Reasonable rent. Telephone MR. FRANK BUAS, Randolph 3-6000.

FOR RENT: Only a few desirable offices remaining for physicians or dentists at SEVEN CORNERS MEDICAL CENTER in Virginia. More than 50 physicians and dentists presently occupy these attractive suites in this fast-growing area. All services included in rental. Telephone 534-1100.

TO SHARE: Otolaryngologist will share completely furnished office (600 sq. ft.) in Silver Spring, Md. Telephone 588-0011.

TO SHARE: Surgeon in Eye Street medical building wishes to share office; separate consultation room. Address Box 43, 2007 Eye Street, N.W., Washington, D.C. 20006.

FOR RENT: Corner office at Eighth and East Capitol Streets, N.E.; private entrance; will remodel to suit tenant (physician only). Beautiful apartment on second floor, all newly renovated. For further information telephone COLONEL J. SIDNEY WOLF, Appleton 7-7418.

TO SHARE: Internist will share suite (875 sq. ft.) and facilities designed for 2 specialists in new, downtown medical office building. For further information telephone 298-6520.

TO SHARE: Internist in Silver Spring, Md. will share office space (850 sq. ft.) consisting of 3 examining rooms, consultation room, ECG room, laboratory. For information telephone 587-3535.

FOR RENT: Premium space available for main office, or perhaps second office, made up to specifications. For information call MORRIS GRUBER, 652-0983 or National 8-5740. BETHESDA MEDICAL BUILDING, 8218 Wisconsin Avenue, Bethesda, Md.

FOR RENT: Excellent physicians' suites in MONTGOMERY HOUSE, 4401 East-West Highway. Choice suburban location, 2 blocks to center of Bethesda. Ample parking. Modern, air-conditioned building. Area newly zoned for professional use. Modest rentals, $240 and $306.50 per month. Telephone 652-6829 or Mr. Amatulli, H. G. SMITHY Co., Sterling 3-3300.

FOR RENT: Office space in NEW MEDICAL BUILDING at 1726 Eye Street, N.W. All utilities included plus switchboard service. Central air-conditioning. Parking available. Telephone 298-6936.

FOR RENT: Medical suite, partitioned; 800 sq. ft. available (can be reduced to 600). All utilities, including air-conditioning; private toilet. For complete information address MANAGER, 1800 EYE STREET MEDICAL BUILDING, or telephone Republic 7-4777.

FOR RENT: Offices in medical building, vicinity Farragut Square, consisting of reception room, business office, 2 consultation rooms, all large; 6 examining rooms; laboratory, 1500 sq. ft. Will accommodate 2 or 3 doctors. Rental, $350 month. Utilities not included. Telephone Woodley 6-0696.

"Cappy"

INTRODUCES THE WASHINGTON AREA SPECIALISTS *in collections for Professionals*

Unless We Collect, There Is No Charge

We offer a complete collection service to bring about prompt payments in a dignified, diplomatic manner for those lacking adequate facilities for enforced collections.

'PHONE 882-2000

CAPITAL CREDIT CORP.

7600 GEORGIA AVENUE, N.W. WASHINGTON 12, D.C.

I'M
"Cappy"
an Old Fashioned
girl with MODERN

Classified Advertisements (*Continued*)

EQUIPMENT FOR SALE

NEW LABORATORY, fully equipped, suitable for hematology, blood chemistries and urine examinations. Finest equipment made. Prefer to sell as a whole but would consider piecemeal sale. Telephone Hobart 2-1113.

VASOSCILLATING BED (Sander's) for peripheral vascular diseases. Telephone Executive 3-5423.

EXAMINING TABLE and TREATMENT CABINET (Hamilton); ELECTROCARDIOGRAPH (Burdick); CENTRIFUGE; FILE CABINET, gray (Cole); CARD FILE with 8 drawers (Victor); CHAIRS (3) suitable for reception room; miscellaneous items. Telephone Juniper 5-7852 or 973-3465.

PHYSICIANS' PLACEMENT SERVICE

THE MEDICAL SOCIETY'S **Physicians' Placement Committee** maintains a service to benefit its members and other physicians by locating suitable openings, assistants or associates. It will also assist Government agencies and industrial organizations to secure physicians for their Medical Departments. Call Di 7-3111—ask for Mr. Trust.

NURSES REGISTRY

EXPERIENCED UNDERGRADUATE
& PRACTICAL NURSES

Recommended by Physicians
At Your Service for Day or Night Duty
in Washington and nearby area

CALL—RAndolph 6-6706

BEUCHLER'S

915-19th Street, N.W. Republic 7-6006

Doctors

1st floor suites in a new luxury hi-rise on upper Connecticut Avenue. Management will partition to suit tenant. Rooftop pool privileges plus 24 hour secretarial service. Adequate parking.

REGENCY HOUSE

5201 Connecticut Avenue, N.W., Washington, D. C.

Or Phone 363-4335

Physicians—

ATTENTION!

Now under construction

BOULEVARD MEDICAL CENTER

8301 Arlington Blvd. (Rte. 50)

—Just west of Gallows Road
—Just west of Rte. 495
—Adjacent to Fairfax Hospital

In the heart of Northern Virginia's "hottest" growth area!

Reservations being made for occupancy February 1, 1966

Leasing information:

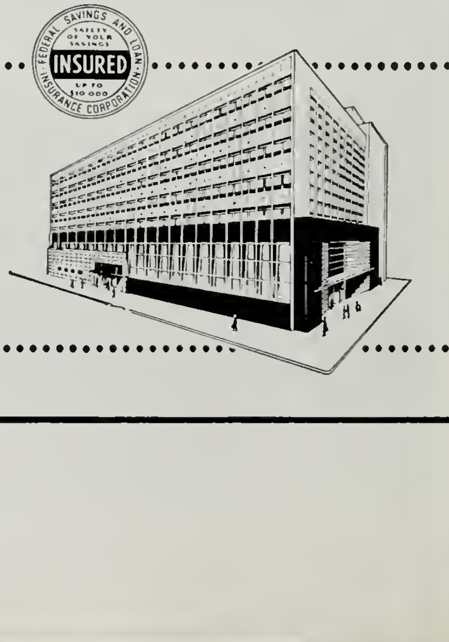
Mr. Appel, 527-6660

Pomponio Properties, Inc.

PERPETUAL . . . a place they'll remember

Visitors to our Nation's Capital from across the ocean—and across the country—take home a lasting impression of Washington's famous "Monument to Thrift"... Perpetual Building Association! It's not because of the magnificent block long structure on E Street N.W. from 11th to 12th (although it is on the list of the Government's suggested business tours) but of the *idea* that built it. Perpetual now has over 180,000 customers, and, being a *mutual* institution, each shareholder owns a *part* of the association. Their pride in such ownership is reflected in their loyalty. Yes, its a great place to visit...and an even greater place to save money!

PERPETUAL
BUILDING ASSOCIATION
EDWARD C. BALTZ, *President*
MAIN OFFICE: 11TH AND E STREETS NORTHWEST
"A Savings Institution . . . Dedicated to Thrift"
RESOURCES: $500,000,000.00


FEDERAL SAVINGS AND LOAN INSURANCE CORPORATION
SAFETY OF YOUR SAVINGS
INSURED
UP TO $10,000

INDEX OF ADVERTISERS

These Advertisers Support Your Journal. Please Give Them Your Support.

Page

Bank
- Riggs National Bank ... 4

Building & Loan Association
- Perpetual Building Association ... 50

Business Counseling
- Professional Business Management ... 47

Collection Agencies
- Capital Credit Corporation ... 48
- Credit Bureau ... 5

Equipment & Supplies
- Accredited Surgical Sales ... 47
- Beuchler's, Inc. ... 49
- Gibson Company ... 47
- Jobst Institute, Inc. ... 18
- Nelson Kloman Surgical Supply Company ... T-62

Funeral Home
- S. H. Hines & Company ... 26

Insurance
- Mutual of Omaha ... 3-C
- Eugene Roesser ... 47
- Russell, Marsh & Kennedy, Inc. ... 6

Investment Planning
- Ferris & Company ... T-58

Nurse Registries
- Association of Undergraduate and Practical Nurses Registry ... 49
- Capital Nurse Registry ... 18
- U. S. Employment Service for D.C. ... T-49

Office Space
- Georgetown Doctors Park ... 11

Page

- Pomponio Properties, Inc. ... 49
- Regency House ... 49
- Shannon & Luchs Co. ... T-38

Pharmaceuticals
- Abbott Laboratories ... 43–46
- Ames Company ... 10
- Bristol Laboratories ... 14–15
- Burroughs Wellcome & Company ... T-46
- E. Fougera & Company, Inc. ... 28–29
- Geigy Pharmaceuticals ... 16
- Glenbrook Laboratories ... 17
- Hynson, Westcott & Dunning, Inc. ... 3
- Lakeside Laboratories, Inc. T-57, 59, 61; 33, 35, 37, 39, 40–41
- Lederle Laboratories ... 7, 20, 27, 30
- Eli Lilly & Company ... 32
- Merck Sharp & Dohme ... T-42
- Parke, Davis & Company ... 2-C
- Pfizer Laboratories, Inc. ... T-52–54
- Wm. P. Poythress & Company ... 19
- Roche Laboratories ... 4-C
- J. B. Roerig & Company ... 25
- G. D. Searle & Company ... T-28–29
- Smith, Kline & French Laboratories ... 52
- Wallace Laboratories ... 8–9, 23
- Winthrop Laboratories ... 13

Pharmacies
- Higger's Drugs ... 47
- Maxwell & Tennyson ... 31
- Peoples Drug Stores ... 12

Sanitariums
- Kalorama Convalescent Home ... 31
- Kensington Gardens Nursing Home ... 22
- Magnolia Gardens Nursing Home ... T-36

T–text

On Stelazine® brand of trifluoperazine
she's calm and alert

When a tranquilizer is needed, 'Stelazine' can regulate the level of anxiety so that the patient is unlikely to overreact to stress but is not tranquilized into psychic inertia. Patients on 'Stelazine' often experience a sense of mental alertness and, because they feel so much better, are more interested in their normal activities.

Contraindicated in comatose or greatly depressed states due to CNS depressants and in cases of existing blood dyscrasias, bone marrow depression and pre-existing liver damage. *Principal side effects,* usually dose-related, may include mild skin reaction, dry mouth, insomnia, fatigue, drowsiness, dizziness and neuromuscular (extrapyramidal) reactions. Muscular weakness, anorexia, rash, lactation and blurred vision may also be observed. Blood dyscrasias and jaundice have been extremely rare. Use with caution in patients with impaired cardiovascular systems.

Before prescribing, see SK&F product Prescribing Information.

Photograph professionally posed.

SK&F
Smith Kline & French Laboratories

ATTENTION!

All members of the Medical Society of the District of Columbia who are *now insured* under the official income protection insurance program!

The Administrator of your plan, in keeping with the principle of providing the best coverage available to members of the medical profession, is pleased to announce that increased benefits are now available to eligible members*:

- **Increased weekly benefits**
- **Longer term of coverage for sickness**

You will be contacted shortly to provide you with details of these improved benefits and to advise you how they can be used to modernize your plan of income protection insurance.

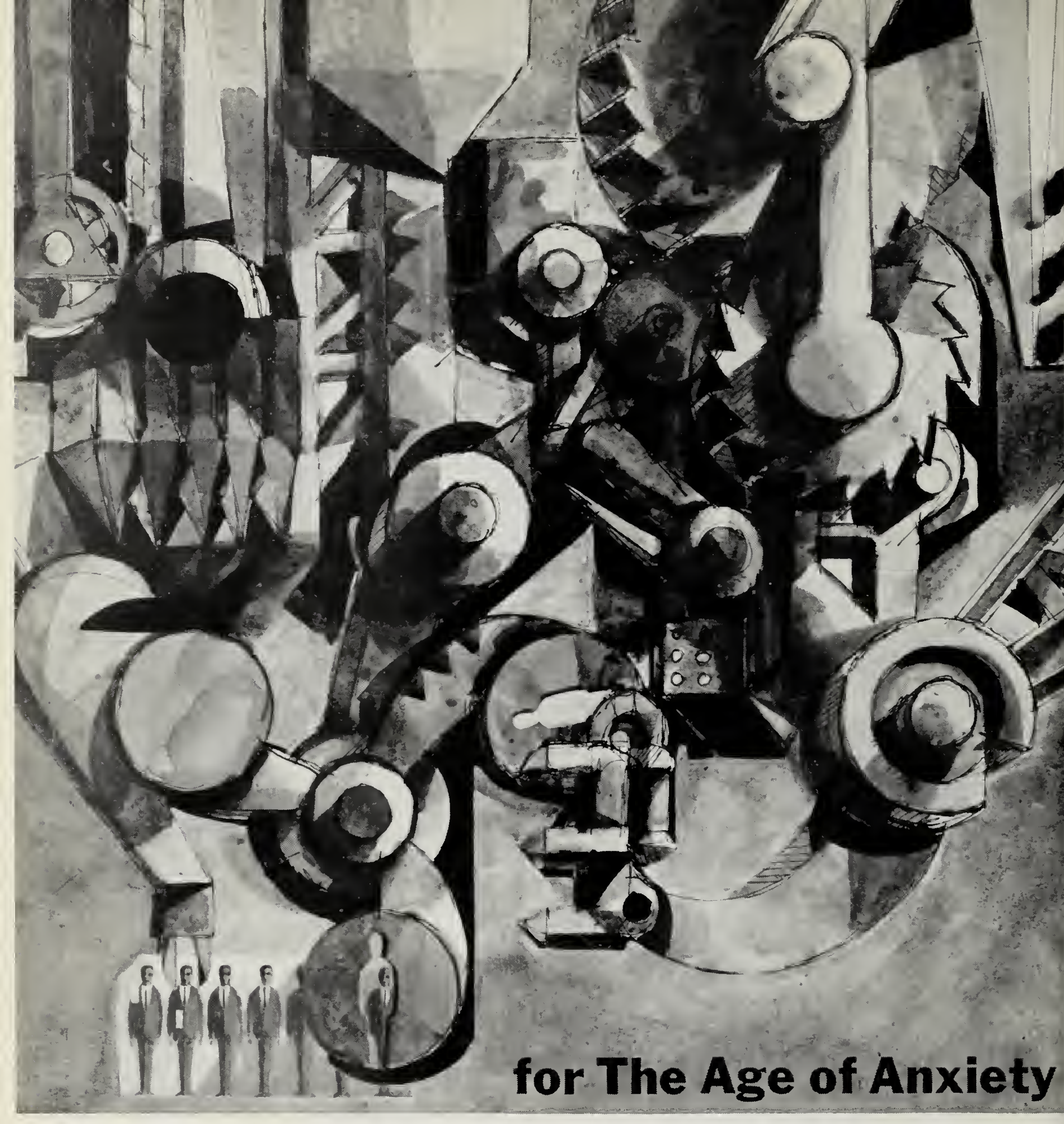
---

* This is an announcement only and does not contain any of the underwriting requirements for eligibility.

Joseph E. Jones, Administrator
1666 Connecticut Avenue, N.W.
Washington, D. C. 20009
Tel. 483-3100

Mutual
OF OMAHA
MAXIMUM BENEFITS MINIMUM COST®

MUTUAL OF OMAHA INSURANCE COMPANY
Life Insurance Affiliate: United of Omaha
Home Office: Omaha, Nebraska


for The Age of Anxiety

For those who cannot cope realistically with the emotional turmoil and stress of modern living, the physician has at hand many valuable psychotherapeutic aids. One of the most useful is Librium, a pre-eminent prescription for excessive anxiety in this modern age.

LIBRIUM® (chlordiazepoxide HCl)

5 mg 10 mg 25 mg capsules in #50's

ROCHE

In prescribing: Dosage—Adults: Mild to moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. Geriatric patients: 5 mg b.i.d. to q.i.d. **Side Effects:** Side effects, usually dose-related, include drowsiness, ataxia, minor skin rashes, edema, menstrual irregularities, nausea and constipation. When treatment is protracted, blood counts and liver function tests are advisable. Paradoxical reactions may occasionally occur in psychiatric patients. Individual maintenance dosages should be determined. **Precautions:** Advise patients against possibly hazardous procedures until maintenance dosage is established. Though compatible with most drugs, use care in combining with other psychotropics, particularly MAO inhibitors or phenothiazines; warn patients of possible combined effects with alcohol. Observe usual precautions in impaired renal or hepatic function, in long-term treatment and in presence of depression or suicidal tendencies. Exercise caution in administering drug to addiction-prone patients or those who might increase dosage; withdrawal symptoms, similar to those seen with barbiturates or meprobamate, can occur upon abrupt cessation after prolonged overdosage. Caution should be exercised in prescribing any therapeutic agent for pregnant patients. **Supplied:** Capsules, 5 mg, 10 mg and 25 mg, bottles of 50.

Roche Laboratories • Division of Hoffmann-La Roche Inc • Nutley, N.J. 07110

OPY 1

MEDICAL ANNALS of the DISTRICT OF COLUMBIA

SPLAY
ELVES

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
3 MAR 1966

ebruary, 1966 Vol. XXXV · No. 2

rimary Mycotic Aneurysm
. Spector, M.D., and L. Misanik, M.D.

iant Diverticulum of the Colon
V. H. Ferguson, M.D., and G. A. Boinis, M.D.

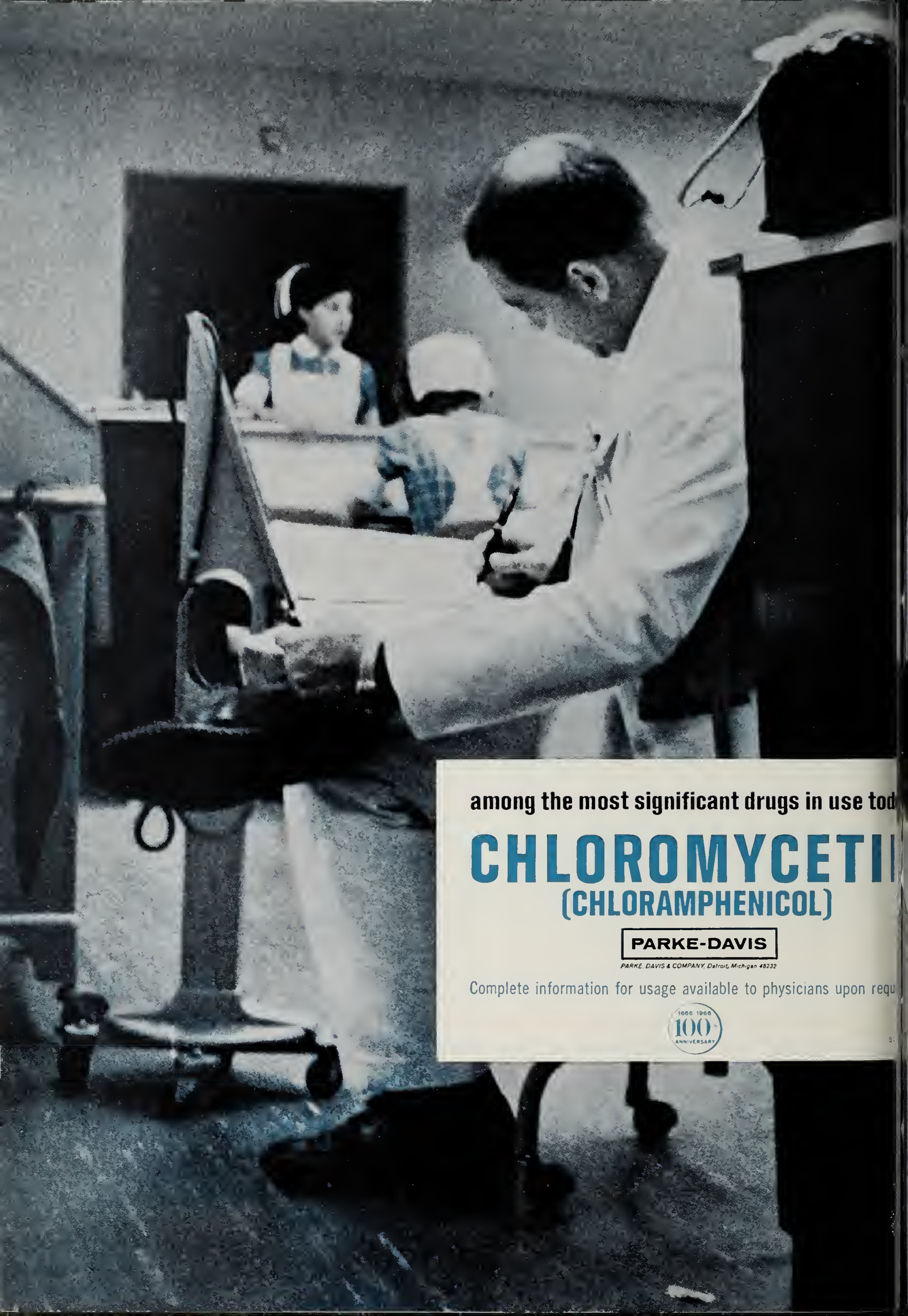
onococcal Arthritis in Pregnancy
. H. Niles, M.D., and E. W. Lowe, M.D.

Iassive Uterine Necrosis
t. Comdr. S. Barchet and Comdr. N. A. Janovski

ansert and Retroperitoneal Fibrosis
. A. Johnson, M.D., and W. M. Ballinger, M.D.

(Complete Index on page 5)

THE MEDICAL SOCIETY OF
THE DISTRICT OF COLUMBIA
2007 Eye Street Northwest



among the most significant drugs in use tod

CHLOROMYCETI
(CHLORAMPHENICOL)

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit, Michigan 48232

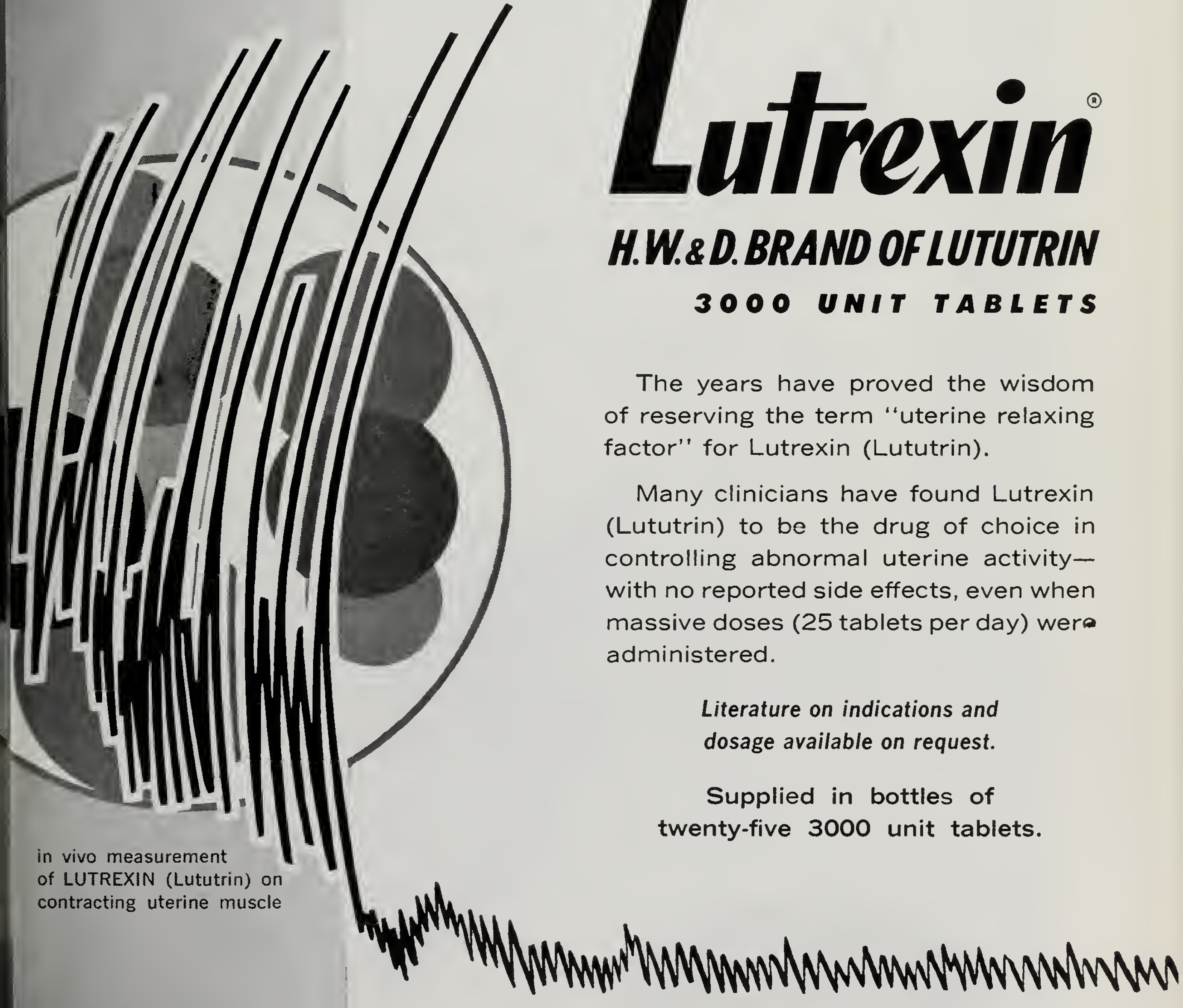
Complete information for usage available to physicians upon requ

1866 1966
100
ANNIVERSARY

IN THE TREATMENT OF SELECTED CASES OF PREMATURE LABOR

AND THREATENED

AND HABITUAL ABORTION



in vivo measurement
of LUTREXIN (Lututrin) on
contracting uterine muscle

Lutrexin®

H.W.&D. BRAND OF LUTUTRIN

3000 UNIT TABLETS

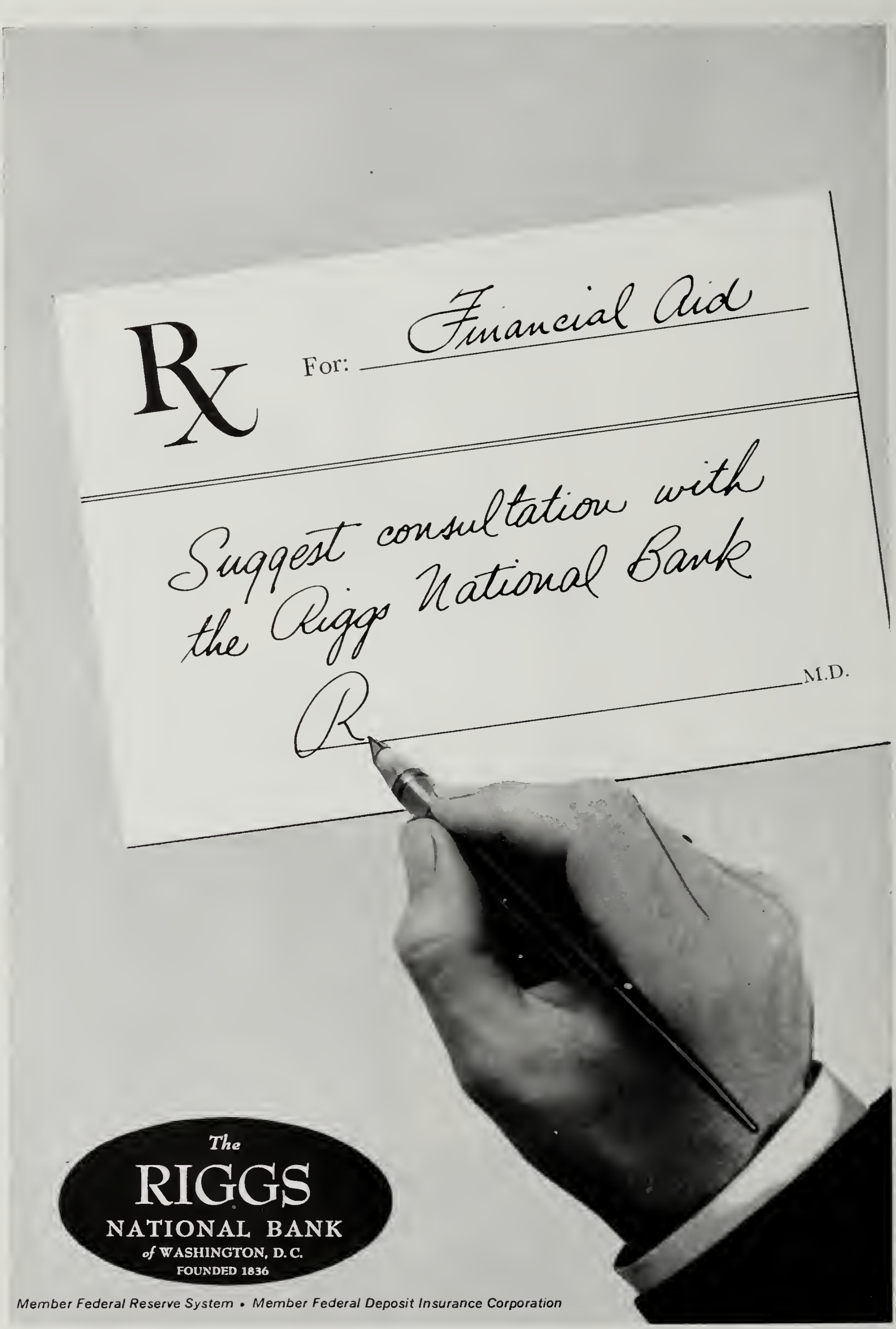
The years have proved the wisdom of reserving the term "uterine relaxing factor" for Lutrexin (Lututrin).

Many clinicians have found Lutrexin (Lututrin) to be the drug of choice in controlling abnormal uterine activity—with no reported side effects, even when massive doses (25 tablets per day) were administered.

Literature on indications and dosage available on request.

Supplied in bottles of
twenty-five 3000 unit tablets.

HYNSON, WESTCOTT & DUNNING, INC.
(LTR21)
BALTIMORE, MARYLAND 21201



℞ For: Financial Aid

Suggest consultation with the Riggs National Bank

R M.D.

The
RIGGS
NATIONAL BANK
of WASHINGTON, D. C.
FOUNDED 1836

Member Federal Reserve System • Member Federal Deposit Insurance Corporation

MEDICAL
ANNALS

of the District of Columbia

EDITORIAL OFFICE:
2007 Eye Street, N.W., Washington, D.C. 20006
Telephone 223-2230

Copyright ©, 1966
by The Medical Society
of the District of Columbia

Yearly Subscription, $5.00
Single Number, 50¢

Second-class postage paid at Baltimore, Md.
Published monthly at
Mount Royal and Guilford Avenues,
Baltimore, Maryland 21202

Contents for February

SCIENTIFIC ARTICLES

Primary Mycotic Aneurysm: Report of a Case. *Israel Spector, M.D., and Lawrence Misanik, M.D.*, Washington 63

A Giant Diverticulum of the Colon: Report of a Case. *William H. Ferguson, M.D., F.A.C.S., and George A. Boinis, M.D.*, Washington 66

Gonococcal Arthritis in Pregnancy. *J. Herbert Niles, M.D., and Ernest W. Lowe, M.D.*, Washington 69

Massive Uterine Necrosis Following Irradiation for Early Cervical Carcinoma in Pregnancy: Report of a Case. *Lt. Comdr. Stephen Barchet, MC, USN, and Comdr. N. A. Janovski, MC, USNR*, Beaufort, S. C. 71

Headache: Methysergide Therapy Complicated by Retroperitoneal Fibrosis: Report of a Case. *Donald A. Johnson, M.D., M.S., Ph.D., and William M. Ballinger, M.D., F.A.C.P.*, Washington 75

EDITORIALS

The Modern Epidemic and the Physician's Choice 80

Meeting the Needs of Our Patients 81

Recruits Needed for Disaster Hospital 82

(Continued on page 6)

ONLY ONE FIRM CAN PROVIDE ALL THESE SERVICES, OR ANY ONE OF THEM...

- A complete low-cost patient billing service
- Confidential information on every account
- An ethical and effective collection service
- A dignified pre-collection service
- Professional accounts receivable consultation

THE CREDIT BUREAU, INC.

FOUR OFFICES TO SERVE YOU LOCALLY

WASHINGTON, D.C.; ROCKVILLE, MD.; FAIRFAX, VA.; ALEXANDRIA, VA.

3,000 CLOSELY ASSOCIATED AGENCIES THROUGHOUT THE COUNTRY

Call Now to Arrange an Appointment with Our Representative

ED GARRETSON NAtional 8-0680

Contents for February

(Continued)

SPECIAL ARTICLE

The Washington Society of Pathologists—A Historical Sketch. *Colonel James E. Ash, MC, USA (Ret.)*, Rockville, Md. 89

MISCELLANY

First Microfilm Journal in Medicine 68
President's Page: The Reappearance of Venereal Disease 77
Proceedings of the Annual Business Meeting 83
Report on 1965 Clinical Meeting of AMA House of Delegates 88
Health Dept. Notes: New Service for Military Rejectees. *Murray Grant, M.D., D.P.H.*, Washington 96
Medicolegal Abstracts. *Robert R. Montgomery, M.D.*, Washington 97
News and Personals 100
Obituaries 110
National and Regional Meetings *Adv. 14*
Books Received *Adv. 18*
Medical Annals Staff and Officers of Medical Society *Adv. 25*
Book Reviews *Adv. 34*
Classified Advertisements *Adv. 44*
Index of Advertisers *Adv. 47*

INSURANCE FOR THE DOCTOR

***PROFESSIONAL LIABILITY**
OFFICE PUBLIC LIABILITY
LOW COST TERM LIFE INSURANCE

and

EMPLOYEES WORKMEN'S COMPENSATION
EQUIPMENT FLOATER
FIRE INSURANCE CONTENTS
BUSINESS EXPENSE DISABILITY
BONDS ON EMPLOYEES

AUTOMOBILE INSURANCE
ANNUITIES—FIXED & VARIABLE
NON-CAN DISABILITY INCOME
PENSION PLANS FOR DOCTORS
PENSION PLANS FOR EMPLOYEES

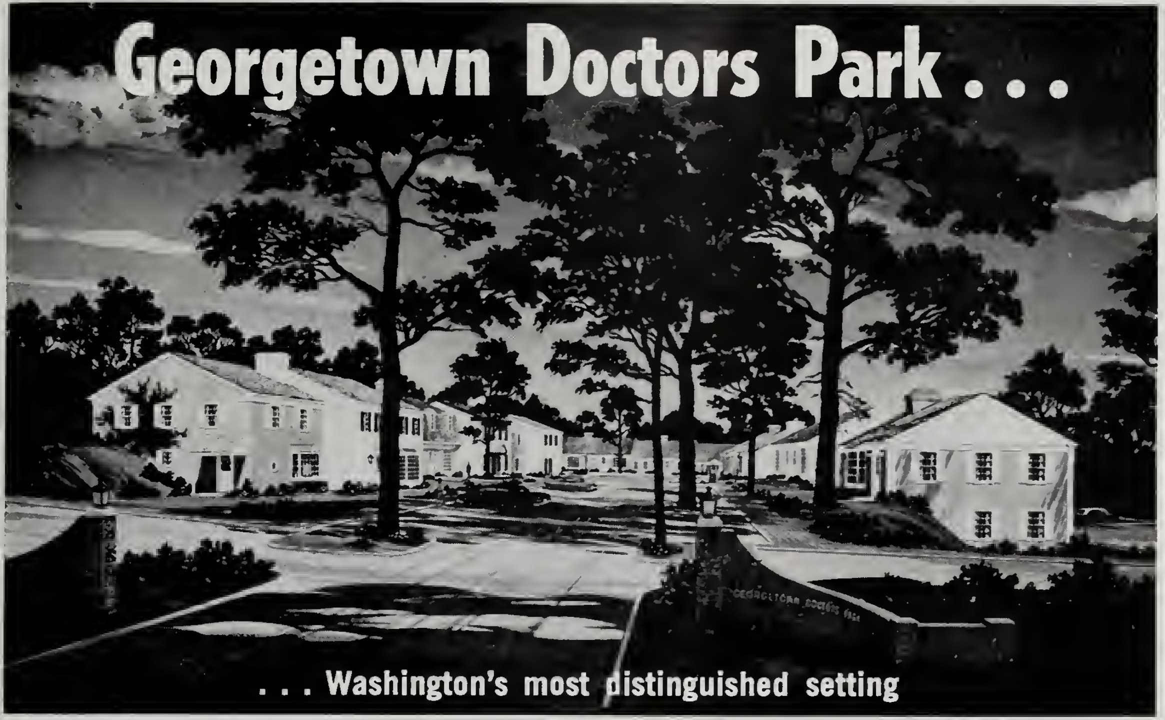
$1,000,000 CATASTROPHE LIABILITY

*endorsed by the Medical Society of the District of Columbia

Russell, Marsh & Kennedy, Inc.

WILLIAM G. RUSSELL
President

5151 Wisconsin Ave., N.W.
Telephone: 244-7600


Georgetown Doctors Park . . .
. . . Washington's most distinguished setting

Architect: Edward H. Noakes & Associates, A. I. A.

For the medical man who seeks a lifetime answer to the question of location, there's no better choice than Georgetown Doctors Park. The location is matchless—the advantages are immeasurable. Your professional suite would be in the midst of the great Bethesda medical and research complex, but also in the heart of Washington's loveliest and most distinguished residential area. Our architect, a specialist in medical design, has created the kind of restful and private atmosphere that both patients and staff appreciate. It fronts on the park of the National Institutes of Health, is two minutes from Suburban Hospital and, is less than a mile from the Capital Beltway and leading arterials in the northwest area. Interior office arrangements are flexible and can be designed for you by our consultants. Each suite features a private entrance and is adjacent to landscaped parking areas accommodating more than 300 automobiles. Soundproofing, air-conditioning, year-round climate control and expert maintenance are assured in these superb Georgian suites. Distinguished in appearance and unmatched in location is Georgetown Doctors Park.

Construction by:
Coakley and Williams
2301 Kansas Avenue
Silver Spring, Maryland

Rental Arrangements by:
John J. Grady Management, Inc.
516 Wheaton Plaza Building
Wheaton, Maryland
Telephone: 946-2070

Inspections at the site arranged at your convenience—call 946-2070

Georgetown Doctors Park • 5401 West Cedar Lane • Bethesda, Maryland

anxiety of the empty years

Although still a handsome woman, she can no longer count on youth. She feels unwanted by her maturing children and advancing years create an abnormal sense of dread.

Since her problem is basically emotional, Vistaril can help her . . . because Vistaril calms smoothly, helps her gain perspective without nducing the euphoria or psychic overgratification that fosters habituation.

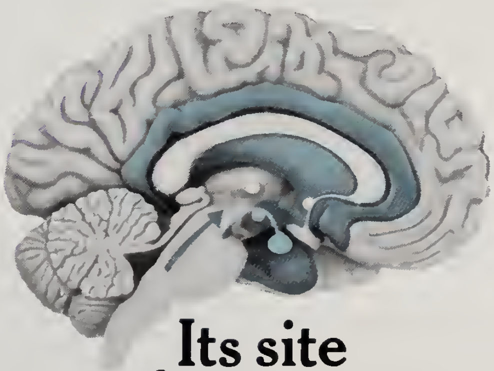
What is Vistaril? Vistaril is hydroxyzine, a tranquilizer entity totally different from the diazepines, meprobamates and the phenothiazines. While equal to the diazepines and meprobamates in effectiveness, Vistaril has been associated with remarkably few of the unwanted psychic and somatic reactions seen with other tranquilizing agents because its primary effect is exerted at the seat of anxiety.

Vistaril tranquilizes with less complication than do the phenothiazines. Deleterious effects, such as hepatotoxicity, blood dyscrasias, skin pigmentation, and opacities of lens and cornea, are not characteristic of Vistaril activity.

Vistaril tranquilizes with less complication than do the diazepines and meprobamate. Withdrawal symptoms, possible psychotropic drug incompatibilities, blood dyscrasias and hepatotoxicity, reported with diazepines and meprobamate, are not characteristic of Vistaril.

No other tranquilizer is as precise, as uncomplicated, as Vistaril®

(HYDROXYZINE)



Its site of action is the seat of anxiety

Pfizer Since 1849

Science for the world's well-being®

Turn page for brief summary...

The record of hydroxyzine experience:

Eight years of clinical effectiveness, over 1,000,000,000 doses prescribed, more than 500 published papers covering nearly 15,000 patients...

Contraindications: Hypersensitivity to hydroxyzine. The parenteral solution, for intramuscular or intravenous use, *must not* be injected subcutaneously or intra-arterially.

Precautions: Hydroxyzine may potentiate the action of central nervous system depressants. In conjunctive use, dosage for these drugs should be decreased. Because drowsiness may occur, patients should be cautioned against driving a car or operating dangerous machinery. The usual precautions for intramuscular injection should be followed; soft-tissue reactions have rarely been reported when proper technique has been used. On reported intravenous injection a few instances of digital gangrene have occurred distal to the injection site, considered to be due to inadvertent intra-arterial injection or periarterial extravasation. Therefore, particular caution should be observed to insure injection only into intact veins; avoid either intra-arterial injection or extravasation. Intravenous administration should be accomplished slowly, no faster than 25 mg. per minute, and not to exceed 100 mg. in any single dose.

Adverse Reactions: Drowsiness may occur; if so, it is usually transitory and may disappear in a few days of continued therapy or upon dosage reduction. Dryness of the mouth may be seen with higher doses. Involuntary motor activity has been reported in some hospitalized patients on higher than recommended dosage.

Supply: Vistaril (hydroxyzine pamoate) Capsules: 25 mg., 50 mg., 100 mg. Vistaril (hydroxyzine pamoate) Oral Suspension: 25 mg. per 5 cc. Vistaril (hydroxyzine HCl) Parenteral Solution: 25 mg./cc.—10-cc. vials, and 50 mg. /cc.—2-cc. and 10-cc. vials.

More detailed professional information available on request.

The Vistaril site of action is the seat of anxiety

No other tranquilizer is as precise, as uncomplicated, as Vistaril®
(HYDROXYZINE)

Science for the world's well-being®
Pfizer
Since 1849

PFIZER LABORATORIES
DIVISION, CHAS. PFIZER & CO., INC. NEW YORK, N.Y. 10017

ESTABLISHED 1873

WOMEN ASSISTANTS

In Washington and Suburbs

CALL COLUMBIA 5-7023
(*Six Trunk Lines*)

The S.H. Hines Company

Funeral Home

2901-03-05-07 FOURTEENTH STREET N.W
Northeast corner Harvard and 14th Streets

W. R. FRANK HINES
President and General Manager

MODERN AIR-CONDITIONED ROOMS WITH CHAPEL, PIPE ORGAN AND REPOSING ROOMS ARRANGED TO MEET EVERY REQUIREMENT AT NO ADDITIONAL CHARGE. CREMATIONS.

No forfeiture of VETERAN'S BURIAL ALLOWANCE
THE EXPENSE IS A MATTER OF YOUR OWN DESIRE

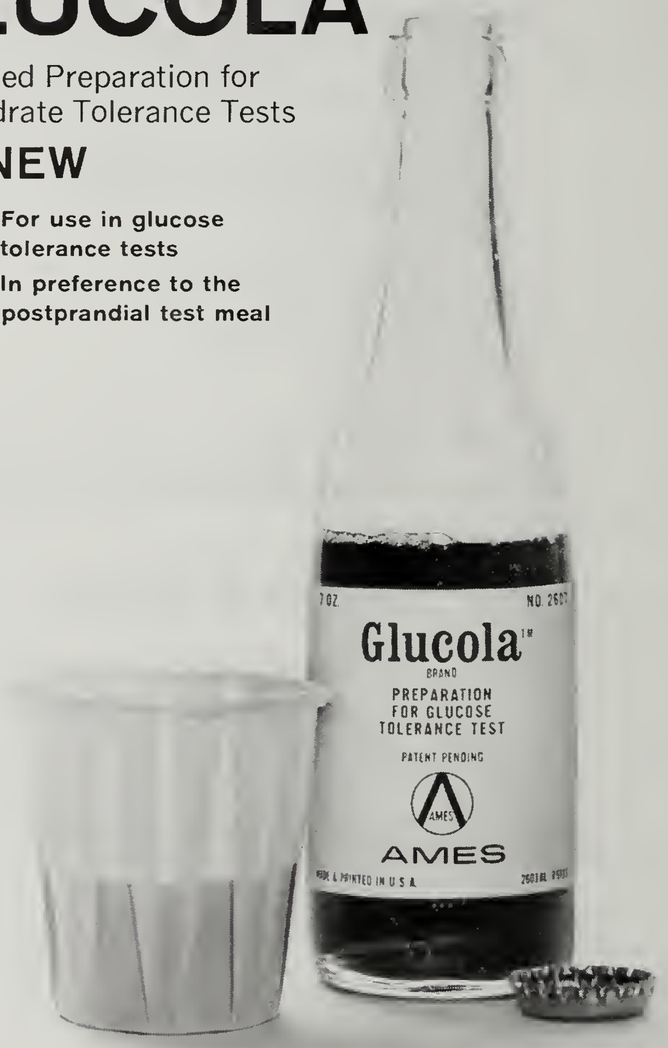
No Branch Establishments
Convenient parking facilities adjoining Funeral Home

GLUCOLA™

Carbonated Preparation for Carbohydrate Tolerance Tests

NEW

- **For use in glucose tolerance tests**
- **In preference to the postprandial test meal**


7 OZ.
NO. 2607
Glucola™
BRAND
PREPARATION FOR GLUCOSE TOLERANCE TEST
PATENT PENDING
AMES
AMES
MADE & PRINTED IN U.S.A.

A NEW SOLUTION FOR AN OLD PROBLEM

Ready to use • Pleasant tasting cola flavor • Well tolerated

A 7-ounce bottle of GLUCOLA provides a liquid oral loading dose equivalent to 75 Gm. of glucose* for carbohydrate tolerance testing. GLUCOLA avoids the nausea that frequently results from lingering sweet laboratory preparations, and the occasional emesis that necessitates rescheduling the test. With GLUCOLA, no time is lost weighing and mixing glucose "cocktails"—only a bottle opener is needed.

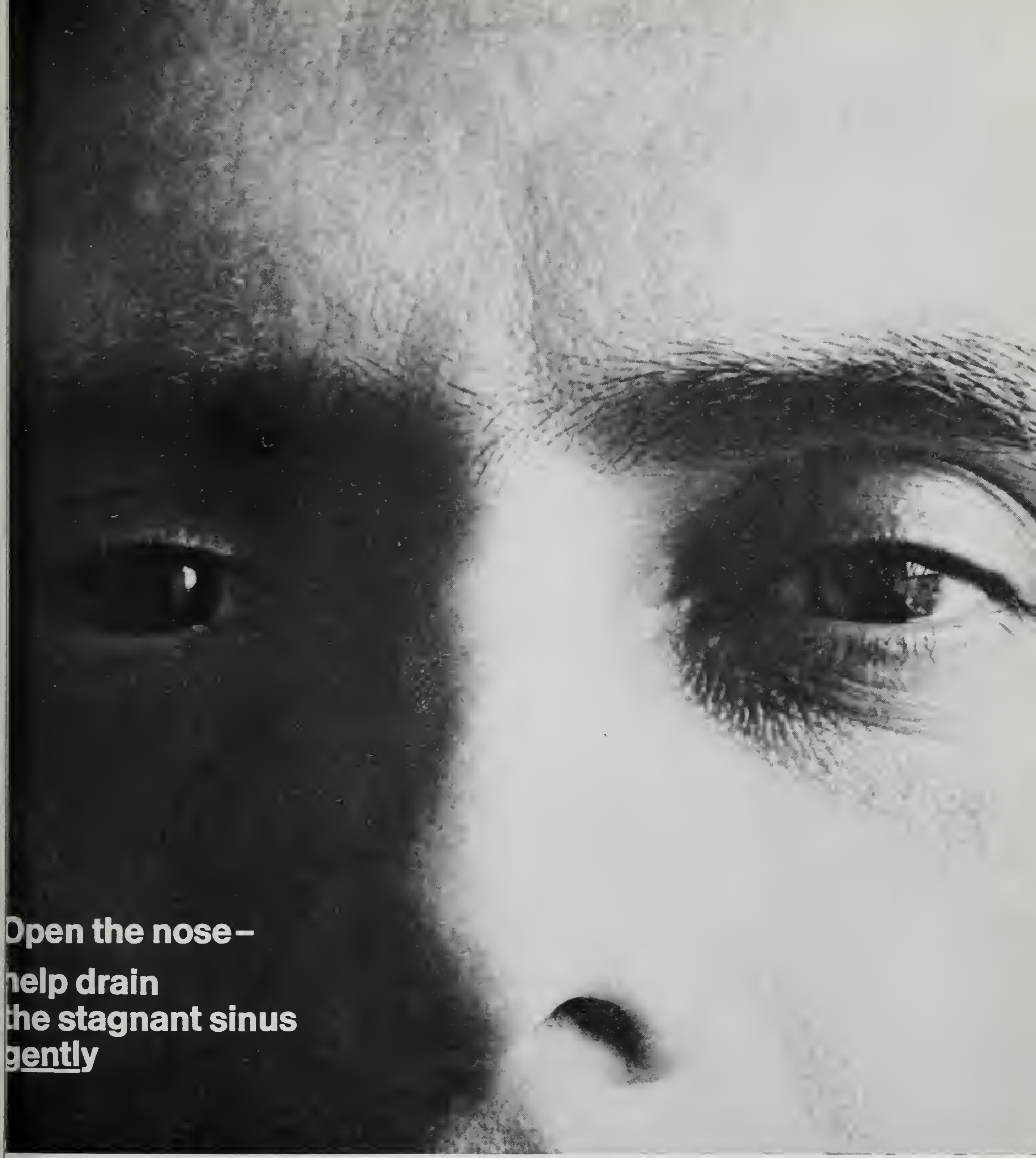
753(R2)64

*The rapidly hydrolyzable saccharides in this formulation assure optimum absorption and glucose levels comparable to those obtained with a 100 Gm. loading dose.

Available through your regular supplier: cartons of 12 7-oz bottles (6 bottles per pack, 2 packs per carton).

Ames Company, Inc.
Elkhart, Indiana

AMES



Neo-Synephrine is a standard among opical vasoconstrictors. It is unsurpassed or reducing nasal turgescence in colds; and a most valuable aid in preventing and treating sinusitis.

Neo-Synephrine stops the boggy feeling of colds at once—works against factors that nduce sinusitis. With Neo-Synephrine nose drops, spray or jelly, turbinates shrink on contact, obstructed ostia open and drainage is re-established.

In sinusitis, Neo-Synephrine helps to promote drainage and hasten recovery.* Used promptly, it helps clear the stagnant sinus and lessen the chances of chronicity.

Neo-Synephrine HCl is available in:
1/8% solution for infants
1/4% solution for children and adults
1/4% pediatric nasal spray for children
1/2% solution for adults
1/2% nasal spray for adults
1/2% jelly for children and adults
1% solution for adults (resistant cases)

*Proctor, D. F.: The Nose, Paranasal Sinuses, and Ears in Childhood, Springfield, Ill., Charles C Thomas, 1963, p. 34.

Winthrop

Winthrop Laboratories, New York, N. Y. 10016

In colds and sinusitis
Neo-Synephrine® HCl
(brand of phenylephrine hydrochloride)
solutions/sprays/jelly

NATIONAL AND REGIONAL MEETINGS

February 27–March 4: International Anesthesia Research Society (40th Congress). Americana Hotel, Bal Harbour, Fla. Address: Dr. A. William Friend, *Executive Secretary*, 227 Wade Park Manor, Cleveland, Ohio 44106.

February 28–March 3: Southeastern Surgical Congress. Marriott Motor Hotel, Atlanta. Address: Dr. A. H. Letton, *Executive Secretary*, 340 Boulevard Northeast, Atlanta, Ga. 30312

March 4–9: 55th Annual Meeting of International Academy of Pathology. Statler-Hilton Hotel, Cleveland. Address: Dr. F. K. Mostofi, *Secretary-Treasurer*, Armed Forces Institute of Pathology, Washington, D.C. 20305.

March 4–9: American Association of Pathologists and Bacteriologists. Statler-Hilton, Cleveland. Address: Dr. J. Lowell Orbison, *Secretary-Treasurer*, Department of Pathology, University of Rochester School of Medicine and Dentistry, Rochester, N. Y.

March 16: Northern Virginia Clinical Assembly. Arlington, Va. Address: Dr. Eugene R. Jacobs, National Orthopaedic and Rehabilitation Hospital, 2455 Army-Navy Drive, Arlington, Va.

March 23–25: American Surgical Association. Boca Raton Hotel, Boca Raton, Fla. Address: Mr. Harris B. Shumacker, Jr., *Executive Secretary*, 1100 West Michigan Street, Indianapolis, Ind.

March 26–30: American Society of Abdominal Surgeons. Sherman House, Chicago. Address: Dr. Blaise F. Alfano, *Executive Secretary*, 675 Main Street, Melrose, Mass. 02176.

March 28–31: Collegium Internationale Neuro-Psychopharmacologicum (Fifth International Congress). Sheraton Park Hotel, Washington. Address: C. I. N. P., Congress Secretariat, ℅ Miss Margaret K. Taylor, 3636 16th Street, N. W., Washington, D. C. 20010.

April 4–8: 39th Annual Spring Congress in Ophthalmology and Otolaryngology. Gill Memorial Eye, Ear and Throat Hospital, Roanoke, Va. Address: Superintendent, P. O. Box 1789, Roanoke, Va.

April 14–19: American Dermatological Association. Homestead Hotel, Hot Springs, Va. Address: Dr. Robert R. Kierland, *Executive Secretary*, Mayo Clinic, Rochester, Minn.

April 25–27: American Academy of Pediatrics. Queen Elizabeth Hotel, Montreal. Address: Dr. E. H. Christopherson, *Executive Director*, 1801 Hinman Avenue, Evanston, Illinois 60204.

May 21–22: AMPAC National Workshop. Sheraton-Park Hotel, Washington.

June 25: American Association for the Study of Headache. Conrad Hilton Hotel, Chicago. Address: Dr. Seymour Diamond, *Secretary*, 5214 North Western Avenue, Chicago, Ill. 60625.

DEPROL®

meprobamate 400 mg. +
benactyzine hydrochloride 1 mg.

Indications: 'Deprol' is useful in the management of depression, both acute (reactive) and chronic. It is particularly useful in the less severe depressions and where the depression is accompanied by anxiety, insomnia, agitation, or rumination. It is also useful for management of depression and associated anxiety accompanying or related to organic illnesses.

Contraindications: Benactyzine hydrochloride is contraindicated in glaucoma. Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use.

Precautions: *Meprobamate*—Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of preexisting symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side effects: Side effects associated with recommended doses of 'Deprol' have been infrequent and usually easily controlled. These have included drowsiness and occasional dizziness, headache, infrequent skin rash, dryness of mouth, gastrointestinal symptoms, paresthesias, rare instances of syncope, and one case each of severe nervousness, loss of power of concentration, and withdrawal reaction (status epilepticus) after sudden discontinuation of excessive dosage.

Benactyzine hydrochloride—Benactyzine hydrochloride, particularly in high dosage, may produce dizziness, thought-blocking, a sense of depersonalization, aggravation of anxiety or disturbance of sleep patterns, and a subjective feeling of muscle relaxation, as well as anticholinergic effects such as blurred vision, dryness of mouth, or failure of visual accommodation. Other reported side effects have included gastric distress, allergic response, ataxia, and euphoria.

Meprobamate—Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Dosage: Usual starting dose, one tablet three or four times daily. May be increased gradually to six tablets daily and gradually reduced to maintenance levels upon establishment of relief. Doses above six tablets daily are not recommended even though higher doses have been used by some clinicians to control depression and in chronic psychotic patients.

Supplied: Light-pink, scored tablets, each containing meprobamate 400 mg. and benactyzine hydrochloride 1 mg.
Before prescribing, consult package circular.

WALLACE LABORATORIES / *Cranbury, N. J.*
CD-5726

FOR THE DEPRESSION ↔ INSOMNIA ↔ TENSION ↔ ANXIETY ↔ COMPLEX

TRY DEPROL® meprobamate 400 mg. + benactyzine hydrochloride 1 mg.

a logical first choice

FOR DEPRESSION

even when complicated by anxiety, tension, insomnia, agitation or rumination.

- Acts rapidly.
- Side effects at recommended dosage infrequent, usually easily controlled.

The discomforts of

DIARRHEA
MUCOUS COLITIS
DIVERTICULITIS
SPASTIC URETERITIS
BLADDER SPASM

. . . are relieved by direct musculotropic action with

Trocinate®

BRAND THIPHENAMIL HCl

Available in 100 milligram pink sugar-coated tablets.

The high therapeutic index permits dosage sufficient to relieve spasm promptly. The usual initial dose is 4 tablets. Maintenance dosage is usually one or two tablets 4 times a day.

Trocinate *BRAND* THIPHENAMIL HCl

BETA-DIETHYLAMINOETHYL DIPHENYLTHIOACETATE HYDROCHLORIDE

. . . directly relaxes smooth muscle spasm
. . . combats hypermotility
. . . non-mydriatic – may be used in glaucoma

Trocinate (Thiphenamil HCl) has been found in three clinical studies, (J. Mo. Med. Assoc., 48:685-6; Med. Rec. & Annals, 43:1104-6; J. Urol., 73:487-93), to be effective and to be free of side-effects. Fifteen years of wide clinical usage has affirmed the safety and effectiveness of Trocinate.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA
Manufacturers of ethical pharmaceuticals since 1856

The Pain Is Gone

Despite introduction of synthetic substitutes, efficacy of 'Empirin' Compound with Codeine remains unchallenged.

'Empirin'® Compound with Codeine Phosphate gr. 1/2 No. 3

Each tablet contains: Codeine Phosphate gr. ½ (Warning—May be habit forming), Phenacetin gr. 2½, Aspirin gr. 3½, Caffeine gr. ½.

Keeps the Promise of Pain Relief

BURROUGHS WELLCOME & CO. (U.S.A.) INC., TUCKAHOE, N.Y.

Save . . .

at National Permanent, one of the area's oldest and largest Savings and Loan Associations

CURRENT
DIVIDEND RATE
4 1/4%
PER ANNUM

INSURED

NATIONAL PERMANENT SAVINGS
AND LOAN ASSOCIATION
Founded 1890

MAIN OFFICE
14th & G Streets, N.W.
CONNECTICUT AVE. AT K ST.
1000 Connecticut Ave.
CHEVY CHASE
5700 Connecticut Ave.
LANGLEY PARK, MD.
7633 New Hampshire Ave.

ASSETS OVER $150,000,000.00

BOOKS RECEIVED

Acknowledgment is made of the following books which have recently been received.

Gastroenterology, Volume III, 2nd ed. Henry L. Bockus, M.D., and Present and Former Colleagues at the University of Pennsylvania Graduate School of Medicine and School of Medicine. Price, $30.00. Pp. 1352, illustrated. Philadelphia: Saunders, 1965.

Symposium on Cataracts. Transactions of the New Orleans Academy of Ophthalmology. Benjamin F. Boyd, M.D.; Leonard Christensen, M.D.; A. Ray Irvine, Jr., M.D.; Murray F. McCaslin, M.D.; P. Robb McDonald, M.D.; John M. McLean, M.D., and Richard C. Troutman, M.D. Price, $19.50. Pp. 340, illustrated. St. Louis: Mosby, 1965.

Ciba Foundation Study Group No. 20: Functions of the Corpus Callosum. E. G. Ettlinger, M.A., Ph.D., Editor and Organizer; A. V. S. de Reuck, M.Sc., D.I.C., and Ruth Porter, M.R.C.P., Editors for the Ciba Foundation. Price, $3.75. Pp. 156, with 28 illustrations. Boston: Little, 1965.

Twins: Twice the Trouble, Twice the Fun. Betsy Holland Gehman. Price, $4.95. Pp. 224. Philadelphia: Lippincott, 1965.

Symposium on the Lens. Sponsored by Visual Sciences Study Section and University of Minnesota. Supported by National Institute of Neurological Diseases and Blindness, National Institutes of Health, Conference Grant No. NB-05145-01. Organizing Committee: John E. Harris, Chairman; Marguerite Constant, Calvin Hanna, Seymour Halbert, V. Everett Kinsey and Albert Potts. Price, $18.50. Pp. 381, illustrated. St. Louis: Mosby, 1965.

Therapeutic Radiology. Rationale, Technique, Results, 2nd ed. William T. Moss, M.D. With foreword by Lauren V. Ackerman, M.D. Price, $18.75. Pp. 514, with 170 illustrations. St. Louis: Mosby, 1965.

Current Concepts in Medical Practice. John E. Mullins, M.D., Editor. Price, $10.75. Pp. 436, illustrated. St. Louis: Mosby, 1965.

Ciba Foundation Symposium: Colour Vision: Physiology and Experimental Psychology. Edited by A. V. S. de Reuck, M.Sc., D.I.C., A.R.C.S., and Julie Knight, B.A. Price, $12.50. Pp. 382, with 98 illustrations. Boston: Little, 1965.

Ciba Foundation Study Group No. 21: Hashish: Its Chemistry and Pharmacology. Edited by G. E. W. Wolstenholme, O.B.E., F.R.C.P., F.I. Biol., and Julie Knight, B.A. Price, $2.95. Pp. 96, with 8 illustrations. Boston, Little, 1965.

Cardiac Evaluation in Normal Infants. The Clinical and Clinical Laboratory Differentiation Between Normal and Abnormal. Robert F. Ziegler, M.D. Price, $12.75. Pp. 170, illustrated. St. Louis: Mosby, 1965.

ANTIDIARRHEAL
4 Fl. Oz.
Donnagel®
List No 032
Each fluid ounce contains
Kaolin 6000 mg
Pectin 142.8 mg
Hyoscyamine Sulfate 0.1037 mg
Atropine Sulfate 0.0194 mg
Hyoscine Hydrobromide 0.0065 mg
Sodium Benzoate (Preservative) 60.0 mg
Alcohol 3.8 per cent
FOR RELIEF OF SIMPLE DIARRHEA
SHAKE WELL
ROBINS
A. H. ROBINS CO. INC
RICHMOND, VIRGINIA
ROBINS

this part for diarrhea

Kaolin exerts a demulcent action along the gastrointestinal tract and a detoxifying action in the intestines to diminish irritation of the mucosa and lessen hyperperistalsis, nausea and diarrhea.

Pectin exerts its demulcent effect in the entire tract and its detoxifying action primarily in the large bowel to diminish irritation of the mucosa and help restore normal intestinal flora and function.

this part for its discomforts

Belladonna alkaloids as in Donnatal® relieve hypermotility of smooth muscle in the gastrointestinal tract to help control cramping, nausea, and painful straining. Many clinicians consider the belladonna components of Donnagel® to be medicine's most effective depressants of intestinal motility.[1,2] A preparation containing only kaolin and pectin, on the other hand, has "little or no effect on cramps simply because it does not include an agent with antispasmodic action."[3]

Donnagel® treats the whole diarrhea problem.

Available in new 4-ounce plastic bottle on your prescription or recommendation. Also available: Donnagel®-PG (with paregoric equivalent) and Donnagel® with Neomycin. See product literature before prescribing.

References: 1. Kramer, P., and Ingelfinger, F.J.: Med. Clin. N. Amer., *32*:1227, 1948. 2. Hock, C.W.: Clin. Med., *8*:1932, 1961. 3. Winfield, I.W.: Am. J. Gastroent., *31*:438, 1959.

A-H-ROBINS

A. H. Robins Company, Inc.
Richmond, Virginia 23220

"CLEAR THE TRACT" WITH

Coughing ahead...
Clear the Respiratory Tract with Robitussin.

Much more than just a slogan, "clear the tract" reflects the dependable antitussive-expectorant action of the three Robitussin formulations. All contain glyceryl guaiacolate, the time-tested expectorant that greatly enhances the output of lower respiratory tract fluid. Increased RTF volume exerts a demulcent effect on the tracheobronchial mucosa, promotes ciliary action, and makes thick, inspissated mucus less viscid and easier to raise. Glyceryl guaiacolate is safe, non-narcotic, and almost universally accepted by patients of all ages.

NOW! THREE ROBITUSSIN FORMULATIONS	**ROBITUSSIN**	**ROBITUSSIN A-C**	**ROBITUSSIN-DM**
EXPECTORANT	●	●	●
DEMULCENT	●	●	●
COUGH SUPPRESSANT		●	●
ANTIHISTAMINE		●	
LONG-ACTING (6-8 hours)			●

FORMULAS

ROBITUSSIN®
in each 5 cc. teaspoonful:

Glyceryl guaiacolate	100 mg.

(Alcohol 3.5%)

ROBITUSSIN® A-C
(exempt narcotic)
in each 5 cc. teaspoonful:

Glyceryl guaiacolate	100 mg.
Pheniramine maleate	7.5 mg.
Codeine phosphate	10.0 mg.

(warning: may be habit forming)
(Alcohol 3.5%)

ROBITUSSIN®-DM
new, non-narcotic
in each 5 cc. teaspoonful:

Glyceryl guaiacolate	100 mg.
Dextromethorphan hydrobromide	15 mg.

Robitussin and Robitussin-DM are available at pharmacies everywhere on your prescription or recommendation.

A. H. Robins Company, Inc. Richmond, Va.

OUR PHOTO:
Engine No. 89 of the Monadnock, Steamtown & Northern Railway pulls a trainload of steam enthusiasts through the New England countryside between Bellows Falls and Chester, Vermont.

A·H·ROBINS

ONE OF THE ROBITUSSIN® FORMULAS

"The most important single ingredient in the restoration of normal bowel function is a soft formed bulk of proper consistency"

YOU CAN SAFELY AND EFFECTIVELY PROVIDE THIS INGREDIENT WITH EITHER KONSYL OR L.A.FORMULA

KONSYL
PLANTAGO OVATA COATING
BURTON, PARSONS & CO

L. A. FORMULA
PLANTAGO OVATA COATING
BURTON, PARSONS & CO.

A mixture of pure hemicelluloses

Pure hemicellulose dispersed in loctose ond dextrose

- **in DIARRHEA** . . . Konsyl and L. A. Formula absorb free fecal water to create a formed gel and normal stools.
- **in CONSTIPATION** . . . Konsyl and L. A. Formula retain water in the stool against the strong dehydrating function of the colon.
- Since a liquid stool contains only 10 per cent more water than the hardest scybalum*

KONSYL	L.A.FORMULA
For the obese patient who needs calorie free medication	For the finicky eater who requires unsurpassed palatability

are the

the bowel normalizers of choice

Made by

BURTON, PARSONS & CO., Inc.

Since 1932 Originators of Fine Hydrophilic Colloids

Washington 27, D. C.

Tainter, M.L. and Buchanan, O.H., Ann. N.Y. Acad. Sc. 54:438, 1954

"All the Comforts of Home"..

for

POST OPERATIVE
MEDICAL
CONVALESCENT
DIABETIC
PARALYTIC
INVALID
AGED
CHRONIC
AMBULATORY
RETIRED
GUESTS, ETC.

AN ULTRA-MODERN HOME IN THE SUBURBS ON TEN ACRES WITH A COUNTRY ATMOSPHERE

KENSINGTON GARDENS SANITARIUM

★ A MEDICAL INSTITUTION UNDER THE SUPERVISION OF REGISTERED NURSES ★
LICENSED BY STATE AND COUNTY

3000 McComas Avenue
Kensington, Maryland

- Rehabilitation Facilities
- Private and Semi-Private Rooms with Connecting Baths
- Beautifully Decorated
- Television in Spacious Lounges
- Large Porches
- Lovely Lawns and Shade Trees
- Supervised Diets
- Patients May Retain Their Own Physician
- 24-Hour Nursing Care
- Reasonable Rates
- Recreation and Physical Therapy

MEMBER OF

NATIONAL GERIATRICS SOCIETY
CARE OF THE AGED

AMERICAN NURSING HOME ASSOCIATION

MEMBER
AND MARYLAND NURSING HOME ASSOCIATION
ACCREDITED BY THE NATIONAL COUNCIL
FOR THE ACCREDITATION OF NURSING HOMES

For Further Information Phone

933-0060 or 933-0872

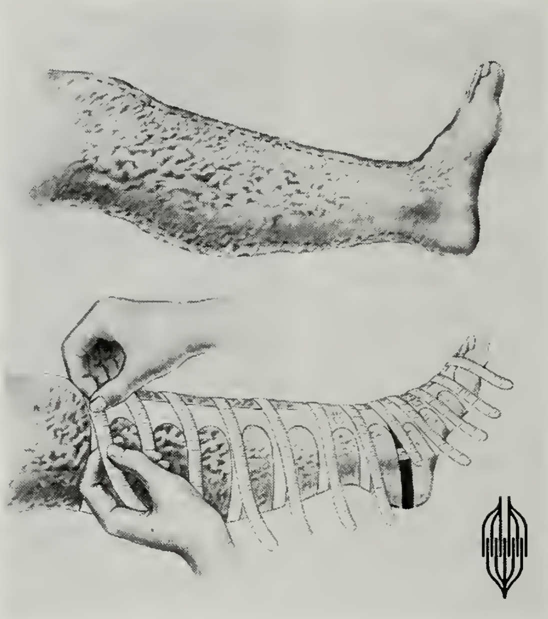
Proprietors-Administrators
LILLIAN H. and
GEORGE L. BRICKER

EACH PATIENT
is precisely measured for a Jobst support.

Jobst venous pressure gradient supports are custom-made from precise measurements of your patient's extremity. Each support is individually engineered to exert the correct counter pressure according to your diagnosis and each support is guaranteed to fit, no strangulation, no puddling, no tourniqueting. Our service center is staffed with experts who will measure and fit your patient on your prescription only.

There is no charge for this service. Here is an advanced, clinically proved program of treatment for vascular deficiencies. For prescription blanks and medical reprints, have your secretary phone or drop us a card. Jobst Service Center 818 Eighteenth St. N.W. Phone: 298-5530 Washington, D. C. 20006

©1966 Jobst



11:47 pm

11:53 pm

12:06 am

The meaningful pause. The energy it gives. The bright little lift. Coca-Cola with its never too sweet taste, refreshes best. Helps people meet the stress of the busy hours. This is why we say things go better with Coke

TRADE-MARK ®

VOLUME 35 • FEBRUARY 1966

EDITOR

Wallace M. Yater, M.D.

MANAGING EDITOR

George W. Cooley

ASSISTANT EDITOR

A. Louise Eckburg

EDITORIAL BOARD

Brian Blades, M.D.
Frederic G. Burke, M.D.
I. Phillips Frohman, M.D.
Naomi M. Kanof, M.D.
Zigmond M. Lebensohn, M.D.
Thomas M. Peery, M.D.
Herbert P. Ramsey, M.D.
George E. Schreiner, M.D.
Donald Stubbs, M.D.

CONSULTING EDITORS

Brig. Gen. Joe M. Blumberg, MC, USA, Director, Armed Forces Institute of Pathology
Irving B. Brick, M.D., Professor of Medicine, Georgetown University School of Medicine
W. Montague Cobb, M.D., Professor of Anatomy, Howard University College of Medicine
Vernon Knight, M.D., Clinical Director, National Institute of Allergy and Infectious Diseases
Walter Kurland, M.D., Chief, Outpatient Service, Veterans Administration Hospital
Colonel Loren F. Parmley, MC, USA, Chief Departmen of Medicine, Walter Reed General Hospital
Alvin E. Parrish, M.D., Associate Professor of Medicine, George Washington University School of Medicine
Captain Rufus J. Pearson, Jr., MC, USN, Director of Professional Services, U.S. Naval Hospital

●

THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

OFFICERS

Robert J. Coffey, M.D., President*
Henry D. Ecker, M.D., President-elect*
Lawrence A. Rapee, M.D., First Vice President*
Claudine M. Gay, M.D., Second Vice President*
Mr. George W. Cooley, Secretary-Treasurer*

EXECUTIVE BOARD

J. Spencer Dryden, M.D., Chairman (1966)
Karl C. Corley, M.D. (1967)
Edward W. Nicklas, M.D. (1968)
Paul R. Wilner, M.D. (1969)

DELEGATES TO AMA

Raymond T. Holden, M.D.*
C. Willard Camalier, Jr., M.D.*

LEGAL COUNSEL

Mr. Warren E. Magee

---

* Ex officio member of the Executive Board

MEDICAL ANNALS
of the
DISTRICT OF COLUMBIA

2007 Eye Street, N.W. Washington, D.C. 20006

The MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA is published monthly by the Medical Society of the District of Columbia for the promulgation of information of scientific, general medical and personal interest. All articles and correspondence should be sent to DR. WALLACE M. YATER, EDITOR, MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA, 2007 Eye Street, N.W., Washington, D. C. 20006.

EXCLUSIVE PUBLICATION: Articles are accepted for publication on condition that they are contributed solely to this journal.

MANUSCRIPTS: Manuscripts must be typewritten, double-spaced, and the original copy submitted.

ILLUSTRATIONS: Photographs and drawings for illustrations must be carefully marked and show clearly what is intended. MEDICAL ANNALS will bear the cost of engravings for 2 illustrations accompanying manuscripts submitted for publication. The cost of more than 2 engravings must be borne by the author.

REFERENCES: References should include the name of author (last name and initials), exact title of article, name of periodical, with volume, page (day of month in weekly), and year. References should be numbered consecutively in the order in which they appear in the text.

COPYRIGHT: Matter appearing in the ANNALS is covered by copyright but, as a rule, no objection will be made to its reproduction in reputable medical journals, if proper credit is given. However, the reproduction for commercial purposes of articles appearing in the MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA must have the approval of the Editor.

REPRINTS: Reprints may be obtained at cost.

ADVERTISING: Pharmaceutical advertising must be approved by the State Medical Journal Advertising Bureau, Inc. Other advertising copy may be accepted subject to the approval of the Editor. All copy or plates must reach the ANNALS office by the first of the month preceding publication. Display and classified advertising rates will be furnished on request.

SUBSCRIPTIONS: Subscription is included in the annual dues of members. To non-members the annual subscription price is: domestic, $5.00; Canadian, $5.50; foreign, $6.00. including postage; single copies, 50 cents.

Checks, etc. should be made payable to the Medical Society of the District of Columbia.

Nitroglycerin
Belladonna
Paregoric
Codeine
Cortisone
Aspirin
Digitalis
Vitamins
Penicillin
Miltown®

An eminent role in medical practice

- Clinicians throughout the world consider meprobamate a therapeutic standard in the management of anxiety and tension.
- The high safety-efficacy ratio of 'Miltown' has been demonstrated by more than a decade of clinical use.

Miltown®
(meprobamate)

Indications: 'Miltown' (meprobamate) is effective in relief of anxiety and tension states. Also as adjunctive therapy when anxiety may be a causative or otherwise disturbing factor. Although not a hypnotic, 'Miltown' fosters normal sleep through both its antianxiety and muscle-relaxant properties.

Contraindications: Previous allergic or idiosyncratic reactions to meprobamate or meprobamate-containing drugs.

Precautions: Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of preexisting symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side effects: Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Usual adult dosage: One or two 400 mg. tablets three times daily. Doses above 2400 mg. daily are not recommended.

Supplied: In two strengths: 400 mg. scored tablets and 200 mg. coated tablets.

Before prescribing, consult package circular.

WALLACE LABORATORIES
Cranbury, N.J.

CM-5761

Diagnostic Problems
. . . With Your Securities?

You need a complete securities "Check-up." Let our Research Department make a thorough analysis of your holdings. Perhaps we can discover the cause of your complaint and prescribe a few beneficial changes that will remedy the problem. No obligation.

To obtain your copy of our convenient Inventory Form for listing securities

Just Phone or Stop By

FERRIS & CO.

Members New York Stock Exchange
611 Fifteenth St. N.W.
STerling 3-8222

KALORAMA CONVALESCENT HOME, INC.

Licensed by the D. C. Department of Licenses and Inspections

INSTITUTIONAL CARE
for the medical management of the acute stages of alcoholism.

2001 KALORAMA ROAD
at 20th Street, N.W. Adams 2-0063

Planned and operated by Physicians—OPEN STAFF policy

Magnolia Gardens Nursing Home

Serving the Greater Washington Area

Specializing in long-term or acutely ill cases, also care during working hours, limited stays for vacation periods. Administered by Registered Nurse, 24-hour professional nursing service. Dietician-controlled meals, physio- and occupational therapy programs.

Your patient is assured medical supervision at all times. In an emergency doctors are on call to carry out your instructions until you personally can attend your patient.

Constructed 1964; completely fireproof; safety features. Gracious living, with attractive lounges, sundecks, chapel, cheery diningroom, homelike bedrooms. Outside gardens and patios for your patients' pleasure.

Illustrated brochure sent on request

9104 Good Luck Road—Lanham, Maryland
Capital Beltway—Exit #30 East-Route 450 PHONE 552-2000
Take next immediate left at Princess Garden Parkway 1 mile to Nursing Home

An antibiotic of choice is one that works

TAO works

Susceptibility Results
Staphylococci [2,3,1]

# OF CULTURES	YEAR	% EFFECTIVE
6,725	1962	88.6%
5,440	1963	88.0%
10,384	1964	88.5%

β-Hemolytic Streptococci [2,3,1]

# OF CULTURES	YEAR	% EFFECTIVE
2,448	1962	89.5%
1,519	1963	95.2%
2,492	1964	96.7%

The Product

In a world study of antibiotics *in vitro*[1], TAO had an overall effectiveness of 87.3%, higher than chloramphenicol and erythromycin, and significantly higher than tetracycline and penicillin.

The Plus... Consistent Performance

Yet antibiotics must not only work. They must work consistently. Here are the results from the largest study of microbial susceptibility ever undertaken. In 29,048 cultures of overt staphylococcal and β-hemolytic streptococcal infections, note the consistency of results with TAO.

TAO®

[triacetyloleandomycin]

J. B. Roerig and Company, New York, New York 10017
Division, Chas. Pfizer & Co., Inc., Science for the World's Well-Being®

TAO Rx information

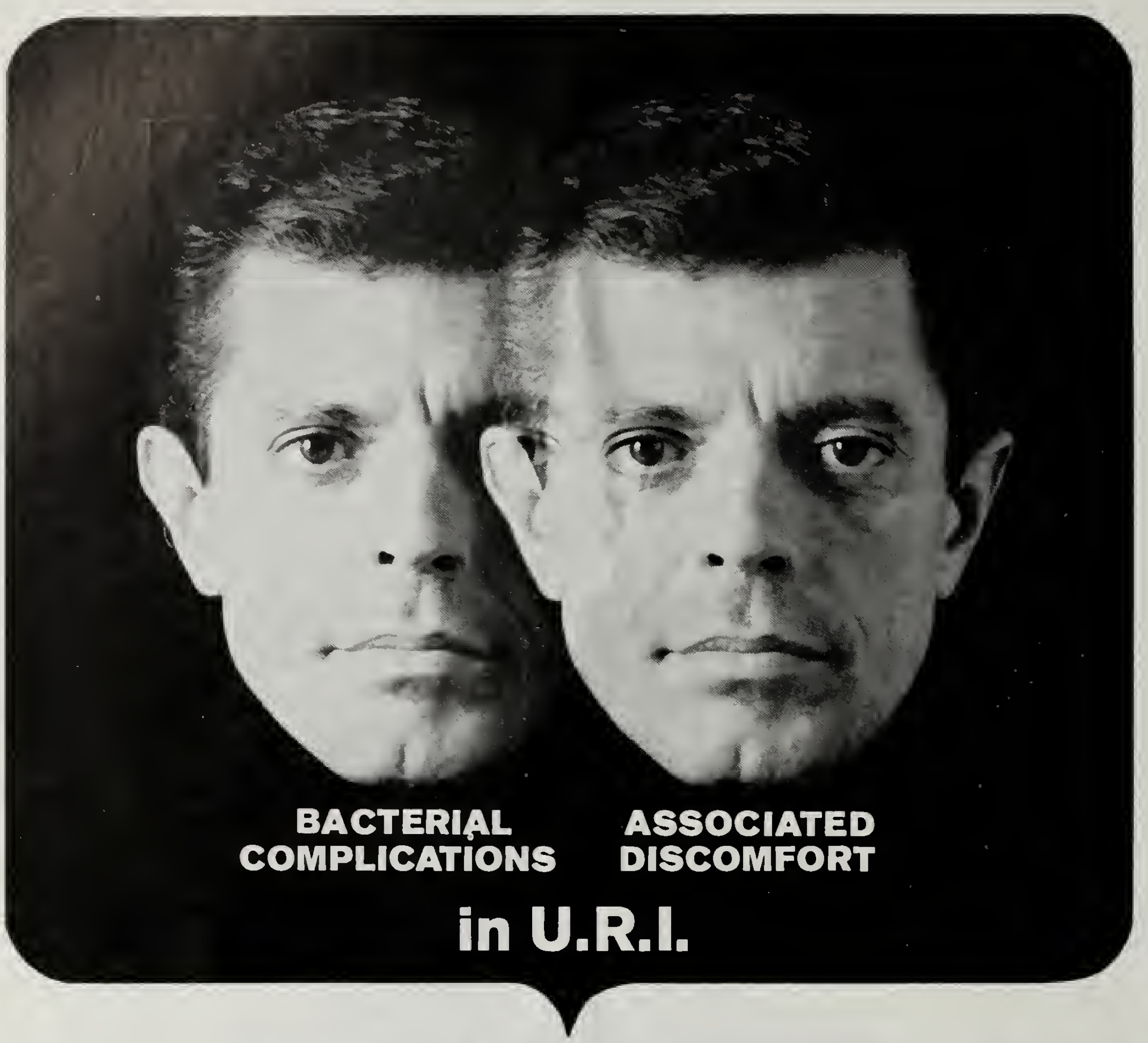
Indications: The bacterial spectrum includes: streptococci, staphylococci, pneumococci and gonococci. Recommended for acute, severe infections where adequate sensitivity testing has demonstrated susceptibility to this antibiotic and resistance to less toxic agents. **Contraindications and Precautions:** TAO (triacetyloleandomycin) is not recommended for prophylaxis or in the treatment of infectious processes which may require more than ten days continuous therapy. In view of the possible hepatotoxicity of this drug when therapy beyond ten days proves necessary, other less toxic agents, of course, should be used. If clinical judgement dictates continuation of therapy for longer periods, serial monitoring of liver profile is recommended, and the drug should be discontinued at the first evidence of any form of liver abnormality. It is contraindicated in pre-existing liver disease or dysfunction, and in individuals who have shown hypersensitivity to the drug. Although reactions of an allergic nature are infrequent and seldom severe, those of the anaphylactoid type have occurred on rare occasions. **References:** 1. Isenberg, Henry D.: Health Laboratory Science **2**:163-173 (July) 1965. 2. Fowler, J. Ralph et al: Clinical Medicine **70**:547 (Mar.) 1963. 3. Isenberg, Henry D.: Health Laboratory Science **1**.185-256 (July-Aug.) 1964.

She's on a diet.
She's discouraged.
She needs your help.

You can encourage her with DEXAMYL®
brand of dextroamphetamine sulfate and amobarbital

'Dexamyl' is the mood-lifting anorectic; it not only assures unexcelled control of appetite but also improves outlook.

Formula: Each 'Dexamyl' Spansule® (brand of sustained release capsule) No. 1 contains 10 mg. of Dexedrine® (brand of dextroamphetamine sulfate) and 1 gr. of amobarbital, derivative of barbituric acid [Warning, may be habit forming]. Each 'Dexamyl' *Spansule* capsule No. 2 contains 15 mg. of Dexedrine (brand of dextroamphetamine sulfate) and 1½ gr. of amobarbital [Warning, may be habit forming]. *Principal cautions and side effects:* Use with caution in patients hypersensitive to sympathomimetics or barbiturates and in coronary or cardiovascular disease or severe hypertension. Insomnia, excitability and increased motor activity are infrequent and ordinarily mild. *Before prescribing, see SK&F product Prescribing Information. Smith Kline & French Laboratories, Philadelphia*



BRING THE TREATMENT TOGETHER IN A SINGLE PRESCRIPTION

ACHROCIDIN®

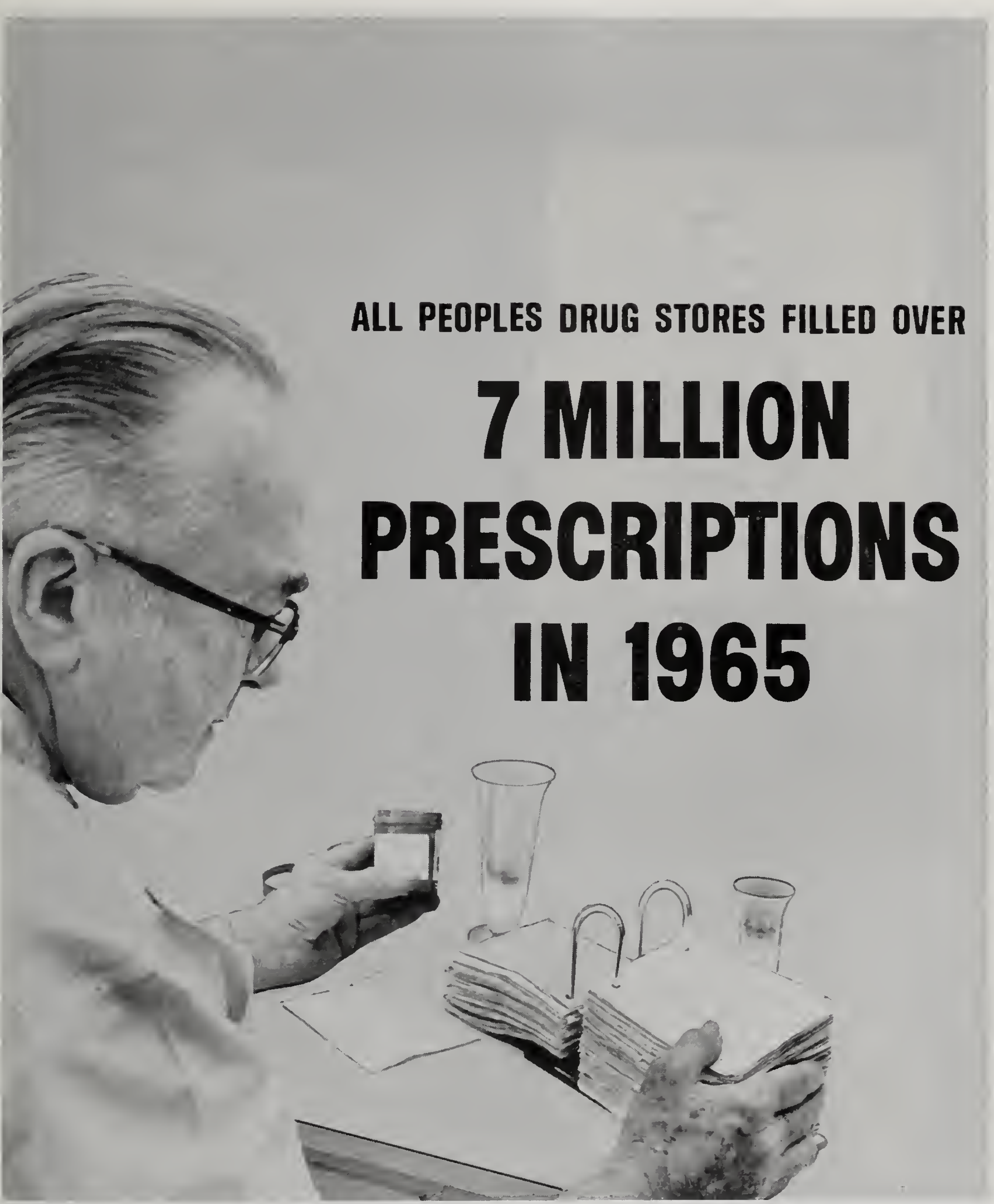
Tetracycline HCl-Antihistamine-Analgesic Compound

Each tablet contains:

ACHROMYCIN® Tetracycline HCl	125 mg	Caffeine	30 mg
Acetophenetidin (Phenacetin)	120 mg	Salicylamide	150 mg
		Chlorothen Citrate	25 mg

Effective in controlling complicating tetracycline-sensitive bacterial infection and providing symptomatic relief in allergic diseases of the upper respiratory tract. Possible side effects include drowsiness, slight gastric distress, anorexia, overgrowth of nonsusceptible organisms, tooth discoloration (if given during tooth formation), photodynamic reaction to sunlight and increased intracranial pressure (in young infants). Average adult dosage: 2 tablets four times daily, given at least one hour before, or two hours after meals. Patient should avoid direct exposure to artificial or natural sunlight; and should not drive a car or operate machinery while on drug. Reduce dosage in impaired renal function. Stop drug immediately at the first sign of adverse reaction.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N.Y. Lederle
6085-2911

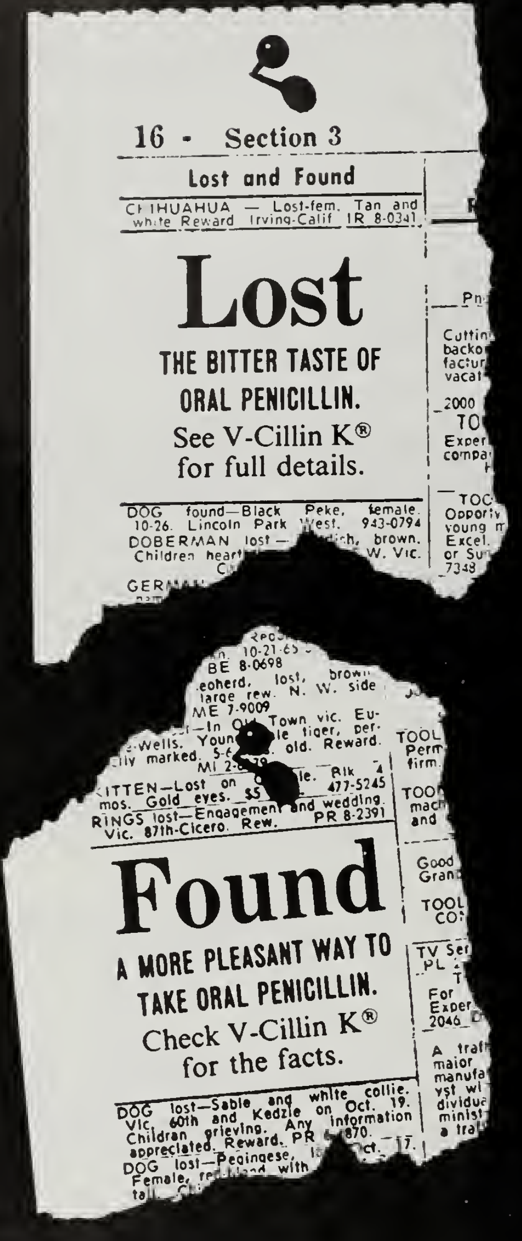


ALL PEOPLES DRUG STORES FILLED OVER
7 MILLION PRESCRIPTIONS IN 1965

a measure of the trust people have in Peoples

Hands. Minds. Hearts that **care. Dedicated** pharmacists who are proud of Peoples' reputation. You can depend on these men and women, just as you can depend on Peoples to fill **your** prescription efficiently, courteously and professionally. Remember, at Peoples, **nothing** is as important as your prescription.

PEOPLES
PRESCRIPTION DRUG STORES



16 - Section 3

Lost and Found

Lost

THE BITTER TASTE OF ORAL PENICILLIN.

See V-Cillin K® for full details.

Found

A MORE PLEASANT WAY TO TAKE ORAL PENICILLIN.

Check V-Cillin K® for the facts.

Patients won't complain about bitter penicillin taste when you specify V-Cillin K. Here's why: It has a special coating, only one and a half *thousandths* of an inch thick. Because it is designed to dissolve after approximately six seconds, this barrier to bitterness remains on the tablet as it slides past the tongue. When the tablet reaches the stomach, however, the coating has dissolved, and the penicillin is ready for immediate absorption into the bloodstream.

Result? The proved efficacy of potassium penicillin V without the penalty of bitter taste.

Indications: V-Cillin K is an antibiotic useful in the treatment of streptococcus, pneumococcus, and gonococcus infections and infections caused by sensitive strains of staphylococci.

Contraindications and Precautions: Although sensitivity reactions are much less common after oral than after parenteral administration, V-Cillin K should not be administered to patients with a history of allergy to penicillin. As with any antibiotic, observation for overgrowth of nonsusceptible organisms during treatment is important.

Usual Dosage Range: 125 mg. (200,000 units) three times a day to 250 mg. every four hours.

Supplied: Tablets V-Cillin K, 125 or 250 mg., and V-Cillin K, Pediatric, 125 mg. per 5-cc. teaspoonful, in 40, 80, and 150-cc.-size packages.

Lilly

V-Cillin K®

Potassium Phenoxymethyl Penicillin

Additional information
available to physicians
upon request.
Eli Lilly and Company,
Indianapolis, Indiana.
600050

MEDICAL ANNALS

of the District of Columbia

February 1966

VOLUME XXXV • NUMBER 2

Primary Mycotic Aneurysm

Report of a Case

ISRAEL SPECTOR, M.D.*, AND LAWRENCE MISANIK, M.D.†

MYCOTIC ANEURYSMS are usually caused by septic emboli arising from the valvular vegetations of subacute bacterial endocarditis (SBE). Aneurysms may also develop from spread of infection from adjacent areas. The involved artery in these cases is usually atherosclerotic. Virulent organisms, especially Salmonella, are the usual cause of the primary infection.[1-5] The development of aneurysms in normal vessels during the course of bacteremia, without endocarditis, and without evidence of spread of infection from adjacent areas, its relatively rare. This rare type of aneurysm has been called a primary mycotic aneurysm.[6] This report describes the development of an aortic aneurysm in a patient with pneumococcal osteomyelitis and bacteremia. Clinical and pathological findings suggest that the arterial lesion in this patient was a primary mycotic aneurysm.

Report of Case

A 76-year-old Negro woman was admitted to the orthopedic service of the D. C. General Hospital with a 5-month history of weakness and a 2-week history of low-back pain. Except for a temperature of 102°F, which was intermittently present throughout her hospital course, physical and laboratory examinations were essentially unremarkable. X-ray films of the spine revealed osteolytic defects in the fourth lumbar and first sacral vertebrae (figure 1). There was no evidence of myeloma or carcinoma on sternal bone-marrow and multiple laboratory and X-ray examinations. Ten days after admission, under local anesthesia, the fourth lumbar vertebra was biopsied with a Craig needle. The biopsy revealed chronic inflammatory reaction and granulation tissue, but a culture of the vertebra taken at the time of biopsy was positive for *Diplococcus pneumoniae*. Blood cultures taken intermittently since admission also revealed pneumococcus. A daily regimen of 2.4 million units of procaine penicillin given intramuscularly was instituted, but the patient's condition deteriorated. One month after admission the patient aspirated her feedings, and a tracheostomy was performed. The patient was then

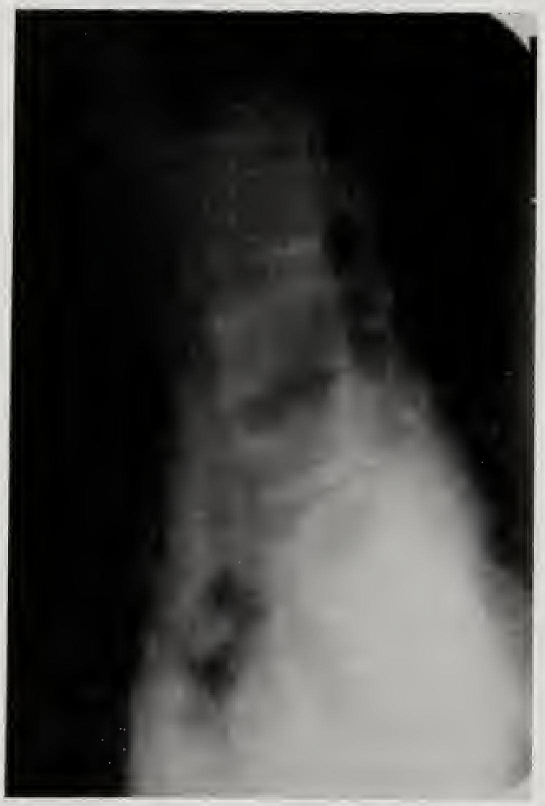


FIG. 1. Lateral view of the spine revealing osteolytic vertebral defects.

---

* United States Public Health Service Postdoctoral Fellow in Hematology, George Washington University Division, District of Columbia General Hospital, Washington, D.C. 20003.

† Director of Laboratories, District of Columbia General Hospital.

transferred to the medical service. On reëvaluation the only significant change from previous findings was in the chest X-ray film. Although this was with a portable technique, compared to the routine admission film there was now definite enlargement of the aortic knob (figures 2 and 3). Repeated blood cultures and multiple cultures of the sputum, urine and spinal fluid were all negative. The patient was treated with 1 million units of intravenous crystalline penicillin G every 2 hours and was supported with intravenous fluids. Although cultures for acid-fast bacilli were negative, isoniazid (INH®) and streptomycin were given empirically. Approximately 2½ months after admission, while the patient was showing gradual improvement, she suddenly died.

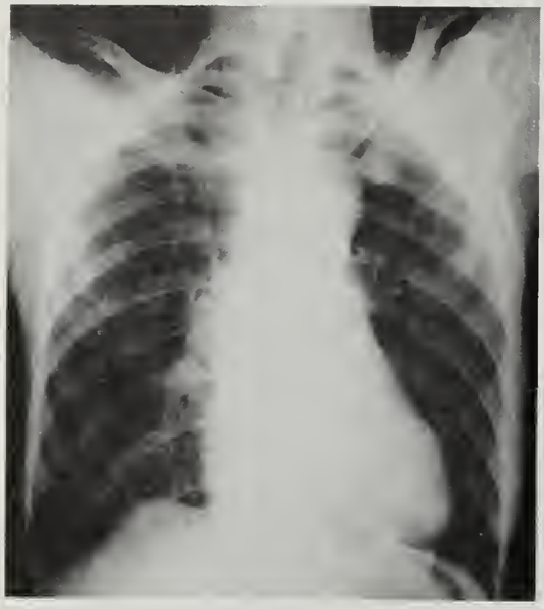


FIG. 2. Chest X-ray film taken on admission to the orthopedic service.

At autopsy the left pleural cavity contained 1,000 ml. of clotted blood. There was a ruptured 5 cm. sacculus aneurysm in the descending portion of the aortic arch. The aorta was mildly involved with arteriosclerosis, but there were no atheromatous plaques or aortitis. The heart was normal, and there were no valvular vegetations. The lung adjacent to the aneurysm was atelectatic, with no evidence of pneumonia (figure 4). There was marked necrosis of the aortic wall forming the edge of the aneurysm, with an associated severe acute inflammatory response. Stains to demonstrate organisms were negative. There was only an osteoblastic focus in sections of the vertebral bone.

Discussion

It is suggested that our patient had a primary mycotic aneurysm. Evidence for this includes the acute onset of aneurysm formation documented by chest X-ray films, the presence of bacteremia, the absence of endocarditis or pneumonia, and the acute aortic inflammatory reaction, with no evidence of underlying arterial disease. The absence of bacteria in the aortic lesion on postmortem examination may be related to the intensive antibiotic therapy that had been given to the patient.

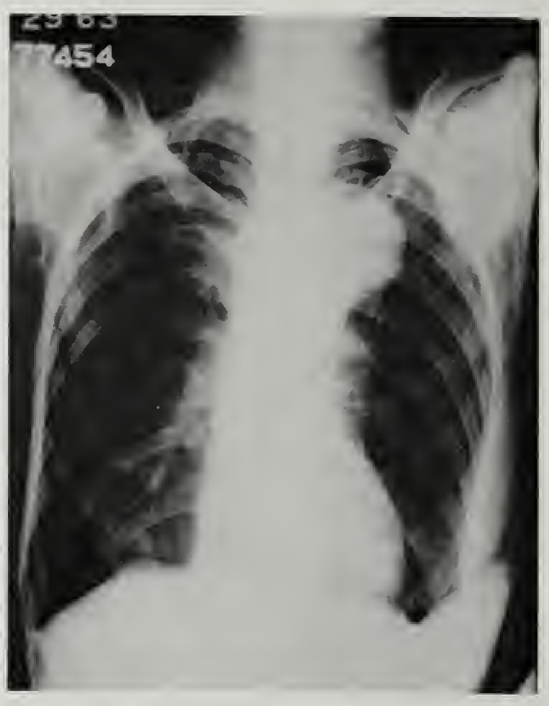


FIG. 3. Chest X-ray film taken after transfer to the medical service. There is now aneurysmal dilatation of the aortic knob.

It is difficult to assess the incidence of primary mycotic aneurysms. The incidence of all types of mycotic aneurysms is quite low. Only 2½ per cent of all aneurysms found at necropsy are mycotic aneurysms.[7] In a review of 330 cases of mycotic aneurysms only 11 per cent were not

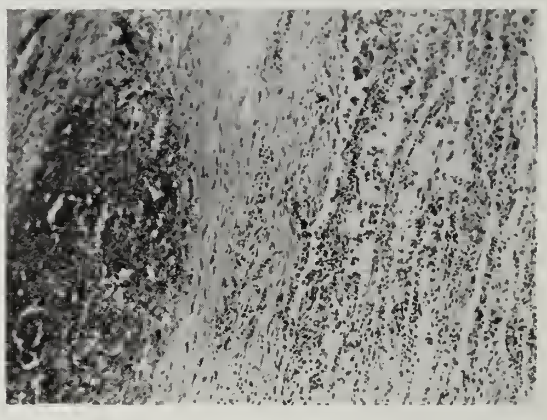


FIG. 4. Base of mycotic aneurysm and subjacent atelectatic lung.

related to endocarditis.[8] There is no mention of how many of the cases had aneurysms secondary to contiguous infection. Revell,[9] in 1945, reviewed the literature and could only document 24 cases of primary mycotic aneurysms. There are multiple recent reports of mycotic aneurysms associated with Salmonella infections, but with 1 exception[10] contiguous infection or underlying arterial disease was present in these cases.[1-5]

Various mechanisms of pathogenesis have been postulated for mycotic aneurysms. Local extension, especially from lung and vertebral infections, is the usual route for the arteritis and aneurysm formation associated with Salmonella and other gram-negative organisms.[4] Embolization directly through the blood stream or through the vasa vasorum is thought to be the mechanism for mycotic aneurysm formation in cases associated with bacterial endocarditis.[11] In primary mycotic aneurysms there may be spread of infection via lymphatic channels, or possibly direct infection of the arterial wall by circulating bacteria.

Mycotic aneurysms usually occur in previously diseased vessels.[1] They are most commonly associated with atherosclerosis but have also been found with syphilitic aortitis[12] and idiopathic cystic medial necrosis.[13] Apparently the intimal irregularities produced by a number of conditions may provide ideal sites for the development of vegetations and lodging of circulating bacteria. The occurrence of primary mycotic aneurysms in normal vessels, unassociated with anatomic irregularities, may be due to hemodynamic factors. Turbulence, or stasis, of flow in one area may possibly predispose to lodgment of circulating bacteria on the wall of the artery at that site.

The bacteria associated with primary mycotic aneurysms are relatively nonvirulent ones; pneumococcus, gonococcus, proteus, and aerobacter are the usual infectious agents found.[14, 15] This contrasts with the virulence of the streptococcus in aneurysms associated with endocarditis, and the suppurative nature of Salmonella-caused arterial lesions.[4]

The aorta is the most common site for all types of mycotic aneurysm formation, approximately 40 per cent of all cases. The arteries to the limbs, the cerebral arteries, and the superior mesenteric arteries are the next most common sites.[8]

Surgical intervention was considered in our patient but was deferred because of her poor general condition. There are several reports in the literature of successful surgical treatment of mycotic aneurysms.[16, 17]

Although the arterial lesion in our patient was somewhat unusual, the case reported serves to reëmphasize that the diagnosis of mycotic aneurysm may be considered in patients with bacteremia, even though there is no evidence of endocarditis.

Summary

A case is reported of a patient with pneumococcal osteomyelitis and bacteremia who was found to have a primary mycotic aneurysm. A primary mycotic aneurysm is an infected arterial lesion originating in a normal vessel, unassociated with bacterial endocarditis, or with inflammation in the tissues adjacent to the aneurysm. The various types of mycotic aneurysms are described, and the differences among them are discussed.

References

1. Zak, F. G., Strauss, L., and Saphra, I.: New Eng. J. Med., 1958, **258,** 824.
2. Ten Eyck, F. W., and Wellman, W. E.: Postgrad. Med., 1959, **26,** 334.
3. Hyde, R. D., and Davis, P. K.: Brit. Med. J., 1962, **1,** 30.
4. Sower, N. D., and Whelan, T. J.: Surgery, 1962, **52,** 851.
5. Sommerville, R. L., Allen, E. V., and Edwards, J. E.: Medicine (Baltimore), 1959, **38,** 207.
6. Crane, A. R.: Arch. Path. (Chicago), 1937, **24,** 634.
7. Parkhurst, G. F., and Decker, J. P.: Amer. J. Path., 1956, **31,** 821.
8. Goadby, H. K., McSwiney, R. R., and Rob, C. G.: St. Thomas's Hosp. Rep., 1949, **5,** 44.
9. Revell, S. T. R.: Ann. Intern. Med., 1945, **22,** 431.
10. Yanoff, M., Frank, J. H., and Frost, J. W.: Amer. J. Med., 1965, **38,** 145.
11. Stengel, A., and Wolferth, C. C.: Arch. Intern. Med. (Chicago), 1923, **31,** 527.
12. Rappaport, B. Z.: Arch. Path. (Chicago), 1926, **2,** 653.
13. Williams, M. J.: Amer. J. Clin. Path., 1952, **22,** 160.
14. Blum, L., and Keefer, E. B. C.: Ann. Surg., 1962, **155,** 398.
15. Blum, L., and Keefer, E. B. C.: J.A.M.A., 1964, **188,** 133.
16. Sullivan, J. J., and Mangiardi, J. L.: Ann. Surg., 1958, **148,** 119.
17. Nabseth, D. C., and Deterling, R. A.: Surgery, 1961, **50,** 347.

A Giant Diverticulum of the Colon

Report of a Case

WILLIAM H. FERGUSON, M.D., F.A.C.S.*, AND GEORGE A. BOINIS, M.D.†

THE PURPOSE OF THIS ARTICLE is to present a case of a giant diverticulum of the descending colon of unusual size measuring 20–23 cm. in diameter and an interesting finding consisting of a double opening into the lumen of the colon.

A review of the literature lays great emphasis on the duplication theory with respect to diverticula. This theory would seem to be more applicable to the small bowel. Today our concept of diverticula of the colon indicates a sac or pocket with all layers of the colon microscopically demonstrable.

In 1953 Ravitch[1] reviewed the literature and reported on 21 cases of colon duplication and added a case of his own. The majority of the patients were children—12 females and 9 males. In every instance there was another associated malformation. The majority of these associated malformations were of the urinary system. The next most frequently involved was the reproductive system.

The case that Ravitch added to the literature was a 4½-year-old boy with a Hirschsprung-like picture. He had a double colon from the cecum to the sigmoid, a double bladder and double ureters. There are explanations for the embryology of this problem that are widely quoted:

The result of the pinching off of a few cells from the hindgut with a cystlike structure in the mesentery or mesenteric border of the gut. These most often do not connect with the lumen of the bowel and may or may not have muscular, submucosal and mucosal layers. This group is one of true duplications and is usually associated with other malformations.

Ravitch[1] and Van Zwalenburg[2] indicate the more acceptable explanation of incomplete fusion or partial twinning.

Bickham[3] was able to demonstrate in numerous patients X-ray evidence of extraluminal connections in diverticular disease of the colon.

Cook, Singer and Frank[4] in 1960 reviewed the literature and found only 30 true duplications of the colon. All of these were associated with other malformations.

This background is presented in an effort to define a separate entity—a true diverticulum of the colon, large or small, that microscopically reveals the presence of all layers of the colon in the wall of the diverticulum. The case reported by Silberman[5] would seem to fit this category of a true diverticulum of the colon. The case we wish to add appears to fit properly in this category:

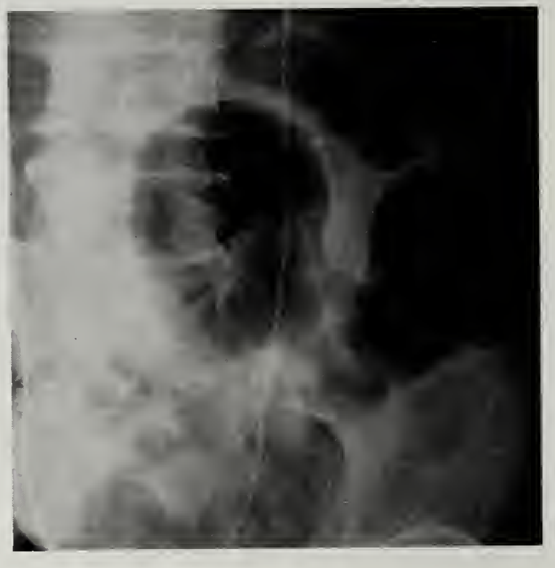


FIG. 1. Preoperative X-ray appearance.

There were no other abnormalities or malformations.

The microscopic study demonstrated evidence of all layers of the colon in the diverticulum.

The giant diverticulum was closely associated with other diverticula in the surgical specimen demonstrating the same microscopic findings.

There was a bridge of normal-appearing mucosa and submucosa between the 2 openings into the lumen of the colon.

Bickham[3] demonstrated by X-rays the ability

---

* From the Department of General Surgery, Washington Hospital Center, Washington, D.C. 20010.

† From the Department of General Practice, Washington Hospital Center.

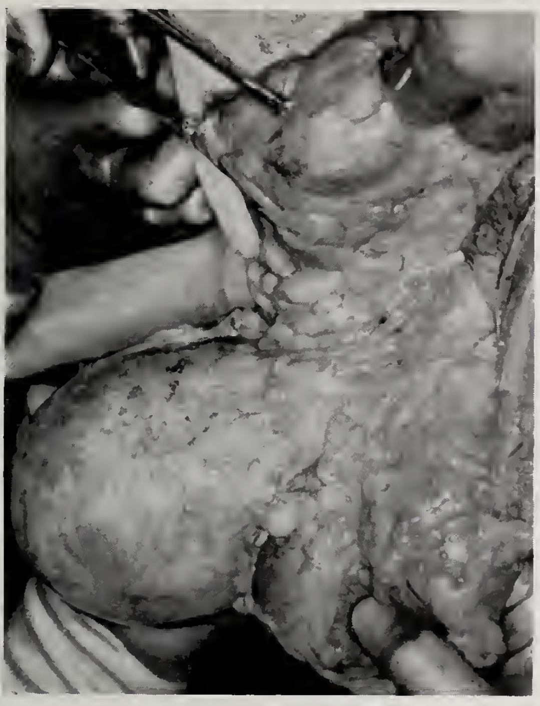


FIG. 2. Diverticulum as seen at surgery.

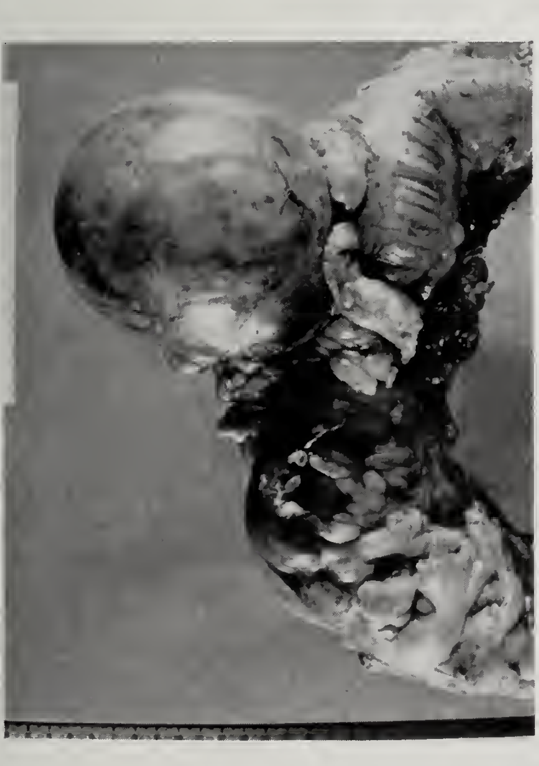


FIG. 3. Water-filled diverticulum, postoperative.

of diverticulitis to produce extraluminal communications back into the lumen of the colon. In this case there is no prior clinical history to indicate an acute inflammatory episode. We do not think that these 2 openings indicate the possibility of a duplication being the explanation for the findings in this case.

This we believe is a true giant diverticulum demonstrating 2 openings into the colon lumen. This was demonstrated on preoperative X-ray studies as shown in figure 1.

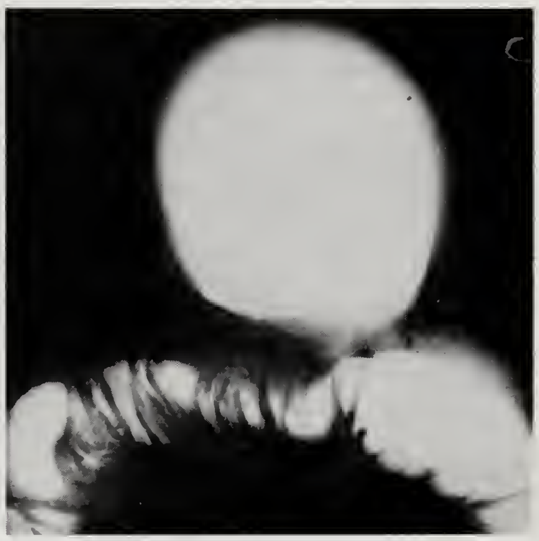


FIG. 4. Barium-filled diverticulum, postoperative.

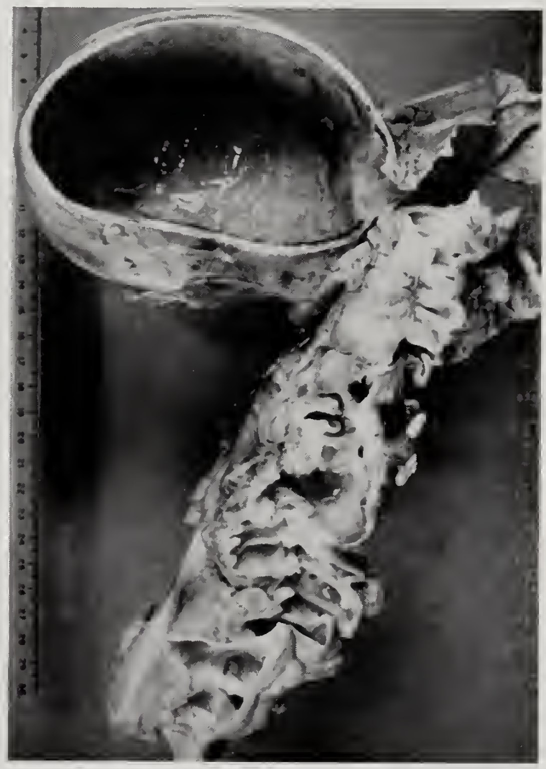


FIG. 5. Pathologic specimen.

Report of Case

A 68-year-old man was seen for a physical checkup in December 1963 because his family insisted that he do so. His past history revealed a coronary occlusion in 1954 and a suprapubic prostatectomy in 1956. Neither of these was symptomatic at this time. Physical examination was essentially negative except for a palpable nontender large mass in his left lower abdomen. Laboratory tests gave normal results except for a hemoglobin of 9.7 Gm. with a hematocrit of 31 per cent. At the time of prostatectomy in 1956 an orange-sized mass was found and described as a colon diverticulum or cancer. Subsequent X-ray examinations were not conclusive. Although the patient did not complain of colon problems on close questioning he stated that occasionally he felt a fullness in the lower abdomen. This was always relieved by a large, loose stool.

In January 1964 the patient had a resection of the mass which included a good portion of the descending portion of the colon with primary anastomosis (figures 2–5). Convalescence was satisfactory and free of complications.

We think the lesion is a true giant diverticulum of the colon. The present case, as well as the one reported by Silberman, does not conform to the criteria of duplication of the colon as evidenced by our review of the literature. The gross and microscopic findings are compatible with a diagnosis of true diverticulum of the colon.

References

1. Ravitch, M. M.: Hindgut duplication—doubling of colon and genital urinary tract. Ann. Surg., 1953, **137**, 588.
2. Van Zwalenburg, B. R.: Double colon: differentiation of cases into two groups, with case reports. Amer. J. Roentgen., 1952, **68**, 22.
3. Bickham, C. E.: Fistulous tracts with intestinal communication secondary to abscess formation in diverticulitis. Ibid., 1958, **79**, 854.
4. Cook, W. H., Singer, B., and Frank, L. J., Jr.: Duplication of distal colon; report of a case and its surgical correction. Arch. Surg. (Chicago), 1960, **80**, 650.
5. Silberman, E. L., and Thorner, M. C.: Volvulus of giant sigmoidal diverticulum. J.A.M.A., 1961, **177**, 782.

First Microfilm Journal in Medicine

An *International Microfilm Journal of Legal Medicine*—the first microfilm journal in the field of medicine—has been launched by the Milton Helpern Library of Legal Medicine.

The *Journal* will be published quarterly. It will deal with all aspects of this discipline and contain the following types of material:

Books and monographs that are out of print or otherwise not generally available.

Transactions of important meetings on legal medicine.

Transcribed medical testimony taken at significant judicial trials and Workmen's Compensation hearings.

Instructive case reports accompanied by as many illustrations as the author may deem necessary.

Original articles.

Information regarding specialized laboratory methods and procedures.

The *Journal* will be published regularly on 4 x 6 inch microfilm cards (also called microfiche) which are gaining increasing acceptance throughout the world because of their unusual properties. For one thing, microfilm cards are easy to handle, use, file and retrieve. In addition, they can each take up to 98 pages of text. A further advantage is that microfilm cards are so thin that 10 of them, representing almost 1,000 pages of copy, have a thickness of only about 1/8 of an inch. The *Journal* will publish about 750–1,000 pages each issue.

The *Journal* is read by means of a viewer, or reader, of which there are several types now on the market, ranging in price from about $125 to $400–$500. Many are compact and relatively easy to operate. They usually magnify the image on the microfilm card between 12 and 22 times and produce a picture with dimensions of 8 x 10 inches or 8½ x 11 inches. (The *Journal* will also be published on 35 mm. and 16 mm. roll film for the same price as the microfilm cards—that is, $5 an issue and $17.50 for 4 successive issues.)

Authors will be given full copyright protection on material appearing in the *Microfilm Journal* and will be permitted to use it in printed form elsewhere.

The *Journal* is designed for medical examiners, forensic pathologists, physicians in other specialties with medicolegal implications or aspects, coroners, and members of such nonmedical professions as the law, who are interested in forensic medicine problems.

Milton Helpern, M.D., Chief Medical Examiner of New York City, is the *Journal's* Editor-in-Chief; his address is 520 First Avenue, New York, N. Y. 10016.

—Reprinted from *New York Medicine*, November 5, 1965

Gonococcal Arthritis in Pregnancy

J. HERBERT NILES, M.D.*, AND ERNEST W. LOWE, M.D.†

Due to the hyperemia of the pelvis associated with pregnancy, acute exacerbations of previous pelvic inflammatory disease are uncommon in gravid women. Likewise, acute gonococcal infections acquired during pregnancy are unlikely to ascend higher than the ectocervix because of the mucous plug, an effective barrier.[1] Factors predisposing to gonococcal arthritis include pregnancy, pelvic operations, and instrumentation for urethral strictures, all of which may cause latent infection to flare up.[2]

The onset of gonococcal arthritis in one study of 77 women was most often associated with menstruation or pregnancy.[3]

Materials and Methods

At the District of Columbia General Hospital a review was done of the cases of gonococcal arthritis in females admitted during the period from January 1, 1960 to June 30, 1965. There were 50 female patients with this diagnosis. Of these patients 14 were pregnant. The cases were divided into groups A and B.

The following criteria for making the diagnosis were used:

Group A, definite gonococcal arthritis: In these cases the gonococcus was recovered from effusion in a joint or tendon sheath on smear or culture.

Group B, probable gonococcal arthritis: No gonococci were recovered from the joint, but gonococcal urethritis or cervicitis was proven by smear or culture. In every case the arthritis occurred within 3 weeks of the infection. Urogenital and articular manifestations responded to therapy, and a history of sexual contact with a partner who had a positive diagnosis of gonorrhea was obtained.

Results

The ages ranged from 14 to 32 years. The mean age was 20 years. Parity ranged from 1 to 8, the mean being 2.57. All patients were more than 28 weeks' pregnant, the mean being the thirtieth week of gestation.

Six patients had a temperature greater than 101°F, 4 between 100 and 100.9°F, and 4, 99–99.9°F on admission; none were afebrile. All 14 reported having chills.

All complained of polyarticular joint pain. Ten complained of involvement of the knee (see figure 1), 7 of the wrist, 5 of the ankle, 3 of the shoulder, 3 of the hand, and 2 of the hip. Four patients had symptoms suggestive of urethritis.

All patients had red, hot and swollen joints. None had conjunctivitis.

Two patients had nonspecific skin lesions, 1 a bluish area over the bottom of 1 foot, the other a rash over the back of the hands.

All 14 patients responded within 48 to 72 hours, either with a decrease in pain or reduction of temperature or both, after the institution of antibiotics. Penicillin was used in 11, Chloromycetin® in 1, Erythromycin® in 1, and linomycin in 1. Only 3 obtained significant relief from pain or decrease in temperature with the use of salicylates alone.

Three patients had a 1:4 C-reactive protein test and 6 a nonreactive test. In 5 cases the test was not done.

Eight aspirations were performed, and all resulted in material described as "turbid" or "purulent."

Four patients showed gram-negative intracellular diplococci in the cervical material. Three had gram-negative diplococci (intracellular) in the synovial fluid. Three had positive cervical cultures. One patient had a positive blood culture for gonococci. In 3 cases the sexual partner had recently been diagnosed as having gonorrhea.

No ASO value greater than 166 Todd units was found. The range was between 50 and 166 units. In 2 cases no titer was obtained. Values greater than 200 units usually indicate recent streptococcal infection.

Four were negative to bent flocculation, and 10 patients were not tested. To latex globulin 8 patients were negative, and 6 were not obtained. One was positive to STS, the patient having had a history of congenital syphilis; 13 were negative.

Nine patients had less than 3 per cent uric

---

* Resident in Obstetrics and Gynecology, Howard University Service, District of Columbia General Hospital, Washington, D.C. 20003.

† Chief of Obstetrics and Gynecology, District of Columbia General Hospital.

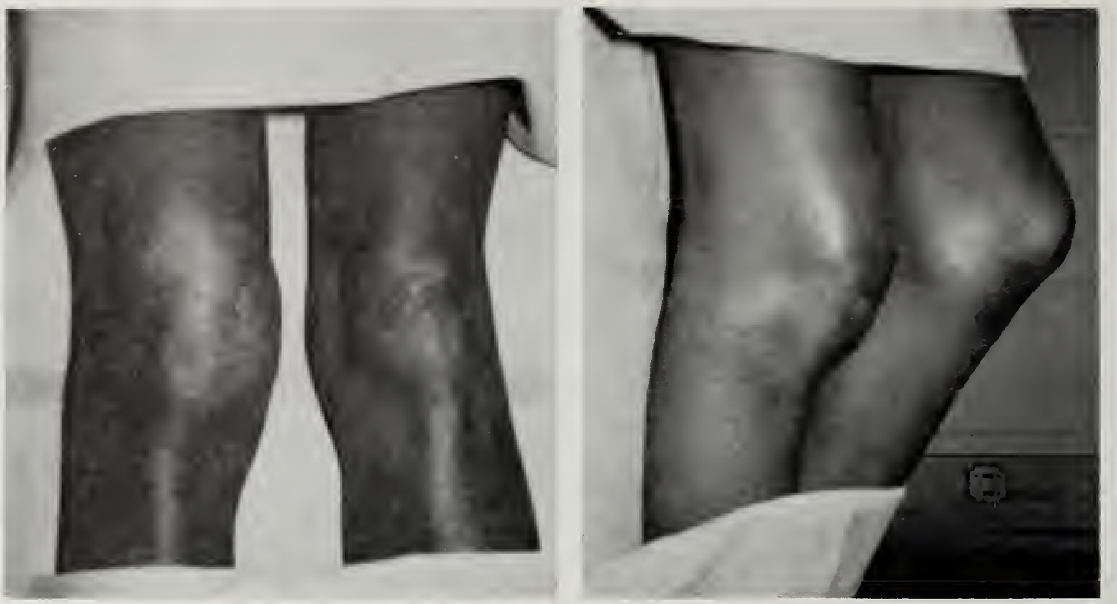


FIG. 1. Anterior-posterior and lateral view of a knee involved with gonococcal arthritis.

acid, 1 had 7.6 per cent, and in 4 cases the test was not done.

Two patients had white blood cell counts of 5,000 to 10,000; 7, 10,000 to 20,000; and 5, greater than 20,000.

Eight patients had sedimentation rates within 26 to 60 mm., and 6 cases were not done. X-ray findings were negative in 10 cases, and in the other 4 cases no X-ray films were taken.

Electrocardiograms in 7 cases were within normal limits.

Sickle-cell preparations in 6 cases were negative.

Comment

In the differential diagnosis of infectious arthritis in pregnancy the following conditions must be considered: Reiter's disease, rheumatic fever in the acute stage, gout, and pyogenic arthritis. The most confusing condition to be differentiated is Reiter's disease. This is an inflammatory arthritis following a bacterial urethritis. The arthritis is not influenced by antibiotic therapy. Conjunctivitis, not necessary for diagnosis, may be late or mild. Women rarely develop Reiter's disease.

Gonococcal arthritis is usually in the 16- to 25-year age group, and Reiter's syndrome in the 25-year age group or over. The spine and heel are more commonly involved in Reiter's syndrome, and a migratory pattern is rare. Radiologic changes are found more frequently in Reiter's than in gonococcal arthritis. Forty-four per cent of patients develop conjunctivitis in some form during the course of Reiter's disease. Only 7 per cent of patients develop conjunctivitis in gonococcal arthritis. White blood cell elevations are uncommon in Reiter's and more common in gonococcal arthritis.[4]

Rheumatic fever in the acute stage with joint involvement usually is preceded by a history of an upper respiratory tract infection, an elevated ASO titer, evidence of carditis (changes on EKG), and response of joint pain to salicylates. Gonococcal arthritis usually has no response to salicylates, a normal electrocardiogram, and a dramatic response to penicillin.

Aside from uric acid determinations to help rule out gout in relation to gonococcal arthritis in pregnancy, the following factors must be considered in making the diagnosis. Gout rarely manifests itself clinically before the menopause and is uncommon in women (5 per cent), but cases during pregnancy have been reported.[5] Gout and pregnancy are an unusual combination.

The main diagnostic feature in pyogenic arthritis is the culturing of the specific organisms from the joint space. Most of the organisms are easier to culture than the gonococcus.

Polyarthritis is rare in pyogenic arthritis. Of 77 cases of pyogenic arthritis reported from the Mayo Clinic only 2 cases had more than 1 joint involved, whereas gonococcal arthritis is polyarticular in about 85 per cent of the cases.

(Continued on page 74)

Massive Uterine Necrosis Following Irradiation for Early Cervical Carcinoma in Pregnancy*

Report of a Case

LT. COMMANDER STEPHEN BARCHET, MC, USN†, AND
COMMANDER N. A. JANOVSKI, MC, USNR†

Early carcinoma of the cervix continues to be a controversial problem as to selection of proper therapy. Available treatment consists of surgery and irradiation or combinations thereof.[1-5] Radiotherapy is the most common method for treatment of invasive squamous-cell carcinoma of the cervix without regard to even the earliest of stages.[1, 5, 6, 7] Until recently primarily surgical attacks have not been practiced frequently in even the earliest of neoplasms. There is increasing preference for surgery selected for early invasive carcinoma, and evidence has been offered that a less than radical approach is less damaging to normal tissues and yields almost ideal salvage rates in this special group.[3, 8-11]

Specific reports of myometrial responses to irradiation have not been published recently in detail. Pathologic observations and critical comments are made regarding a selected patient treated with combination therapy for early invasive squamous-cell carcinoma of the cervix in the fourteenth week of pregnancy. Attention is drawn in this case to the biologic effects of radiation upon a postabortal and surgically manipulated myometrium. The nature, consequences, and results are discussed.

Report of Case

B. L., a 38-year-old gravida VI, Para 3, abortio 2, white beautician had a last menstrual period on November 1, 1964. A Papanicolaou smear taken during the initial prenatal examination was reported as Class III. On February 2, 1965 conization of the cervix was done and the pathologist's diagnosis was squamous-cell carcinoma with early stromal invasion (microcarcinoma). Pelvic examination revealed an apparently normal mobile cervix and adjacent paracervical tissue. At the age of 25 the patient had open heart surgery for repair of an atrial septal defect. She was transferred to another naval hospital for definitive treatment of the established neoplasm. Therapeutic abortion by anterior abdominal hysterotomy was performed, and a 14-week fetus and placenta were removed. Ten days later an initial Ernst radium applicator was inserted for 50.5 hours. The uterine cavity was sounded to nearly 5 inches. The central tandem was loaded with 40 mg. of radium, and the vaginal arms contained 10 mg. in each capsule with the exception of the 2 most medial holders which were not loaded. A second radium application with the same dosage elements was performed 9 days later for an additional 50.5 hours. According to the Ernst chart calculation, 7,000 r was administered to point A, 2,340 r to point B, and 10,800 r to the cervix. Scintillation dosimetry was not performed. Review of the post-application radiograms suggested possible instrument slippage and tandem deviation in both applications.

One month following the second radium application bilateral extraperitoneal pelvic lymph-node dissection was performed. Histopathologic examination revealed only reticulo-endothelial hyperplasia of lymph nodes.

The patient was readmitted for completion of the combined sequence of therapy. Simple abdominal hysterectomy and bilateral salpingo-oöphorectomy were performed on July 13, 1965. At surgery an abscess containing an estimated 5 c.c. of seropurulent material was observed between the bladder and the anterior wall of the uterus. Cultures of this material revealed no growth. The postoperative course was not remarkable, but the patient has continued to have significant urinary urgency and frequency with negative urinalysis and urine cultures.

The gross specimen consisted of a cervix, uterus, both ovaries, and both oviducts. The entire specimen weighed 75 Gm. The external cervical os appeared smooth. The endometrial cavity was filled with necrotic material. The anterior serosal surface of the uterus was irregular and shaggy. There was an area of abscess which measured 1.7 cm. in diameter. The anterior wall of the myometrium measured 1.8 cm. in thickness and at the fundus 1 cm. The consistency of the anterior uterine wall was very soft, and there were numerous areas of confluent myometrial necrosis up to 0.5 cm. in diameter. No previous hysterotomy scar was recognized.

---

* The opinions expressed are those of the authors and do not necessarily reflect the opinions of the Department of Defense or the United States Navy.

† From the Departments of Gynecology and Pathology, United States Naval Hospital, Beaufort, South Carolina.

Microscopic examination revealed atrophic ovaries with prominence of hilar cells and the presence of multiple cystic corpora albicantia. The Fallopian tubes showed intense infiltration of the endosalpinx with acute and chronic inflammatory cells. The serosa of the anterior uterine wall showed partly organized fibrin and the formation of a sterile abscess. The myometrium of the anterior uterine wall showed numerous large and small areas of coagulation necrosis, surgical catgut, and foreign body granulomata (figures 1 and 2). The myometrial vessels exhibited various degrees of fibrosis and obliteration. The cervix showed advanced atrophy. There was no evidence of residual squamous-cell carcinoma.

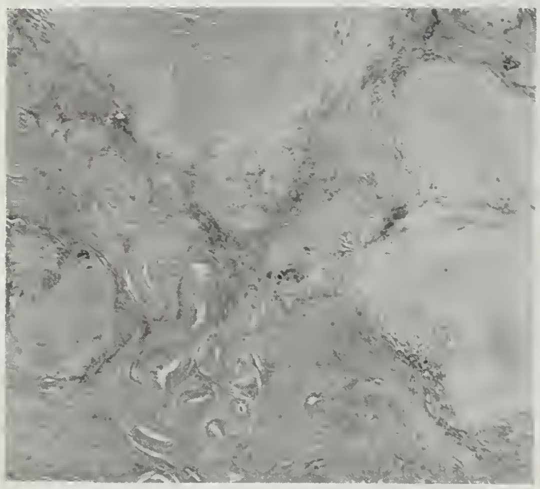


FIG. 1. General view of radiation necrosis of myometrium.

Discussion

This case is presented to clarify certain aspects which are peculiar to it. Microinvasive squamous-cell carcinoma of the cervix is a definite entity. This superficial cancer can be described as an early or very small squamous-cell carcinoma of the cervix in which invasion does not exceed 3 to 5 mm. of invasion depth from the basement membrane as outlined by Mestwerdt,[12] Frick, Janovski, Gusberg and Taylor,[8] and Kaufmann, Ober and Huhn.[3]

It is recognized that carcinoma of the cervix occurs in pregnancy, but the actual statistical occurrence of microinvasive or early carcinoma of the cervix in pregnancy has not been established. It is extremely important that the concept of early invasive carcinoma in pregnancy be recognized and that such cases be treated in the same manner as for this neoplasm in the non-pregnant state.

Severe radiation necrosis of the myometrium occurred in our case. The circumstances whereby such a remarkable radiobiologic effect was produced are of considerable interest. Radiation necrosis of the myometrium alone has been little discussed and in the literature has been dismissed with the single sentence that it occurs. One is able to find little specific information with regard to this pathologic alteration.[13, 14, 15]

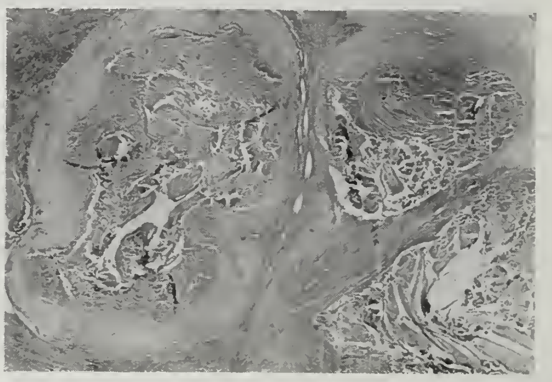


FIG. 2. Radiation necrosis occurring in and around hysterotomy scars of the myometrium. Note extensive degree of coagulation necrosis with almost complete absence of inflammatory reaction around the surgical catgut.

In the case of our patient a cone biopsy was performed in early pregnancy and the diagnosis of an early superficial microinvasive squamous-cell carcinoma of the cervix was established. A succession of therapies followed. Abdominal hysterotomy was followed in less than 10 days by the first of 2 intracavitary and vaginal radium applications. One month later bilateral pelvic lymphadenectomy was performed. This was followed in another 3 months by simple abdominal total hysterectomy and salpingo-oöphorectomy.

The concept of safe tolerance levels of tissue exposed to irradiation has been established upon an empiric basis. However, Sherman[16] stated that the safe dose tolerance level for the uterus is 20,000 r. Twombly[15] stated that irradiation necrosis of the walls of the cervix and of the myometrium do occur and that the radium slough is notoriously slow to separate and to heal.

Myometrial and endometrial necrosis has been reported following the use of Heyman capsules.[14] This author believed that the necrosis was directly related to the increase of dosage produced by a closer application of the capsules to the area affected. It seems unfortunate that there have been reports in the literature upon combination therapy methods, but there have been no specific presentations with regard to direct or indirect effects of irradiation upon the myometrium.[10] Some authors, however, have alluded to possible undesirable effects upon the myometrium.[15] Kottmeier[17] has advised strongly against operative manipulation of the pregnant uterus in preparation for radium application. He has stated that serious damage related to radiation therapy has been most commonly explained upon the basis of overdosage or slippage of the radium instruments.[18, 19]

In the case presented there are probably several contributing factors causing the radiation necrosis. The area of the necrotic process was limited grossly to that area encompassing the anterior wall of the uterus, and it is assumed that this was limited to changes occurring solely in and around the areas of the hysterotomy incision. In the absence of accurate dosimetry measurements in this circumstance, any statements as to slippage or overdosage are merely speculative. In view of the relative dearth of reports of postirradiated, post-hysterotomy extirpated uteri, one can only speculate with regard to the overall causes and implications in this case. It is possible that some authors have experienced similar complications. Kimbrough and Israel[4] suggest when hysterotomy is performed that 2 to 3 weeks be permitted to elapse prior to irradiation in order that sufficient uterine involution and wound healing have taken place. One cannot possibly assume in a 10-day post-hysterotomy uterus that fibroplastic and muscular repair has been completed and fully restored.[20] In our case we believe that the myometrial necrosis occurred secondary to the application of radium in a recently postabortal uterus at a time when the hysterotomy scar had undergone early granulation and proliferation of young fibroblasts and capillaries. In addition there was severe damage to the involuting vascular system of the uterus.

The problem of the proper selection of therapy for any given case of carcinoma is far from solved. However, the concept of individualization of therapy has become well accepted.[2, 5, 17, 18] The application of a standard single therapy to every circumstance regardless of the biologic growth patterns of tumor and all the peculiar aspects which surround the patient has become unacceptable.

Individualization of therapy must become, therefore, an important concept in the overall management. It is especially important to consider the selection of the proper mode of therapy when dealing with a cancer that is no more than superficially invasive according to rigid criteria. In this light, a succession of treatments as applied in this patient can only be regarded as excessive and will carry with it considerable surrounding organ damage and potential patient debilitation. An elective choice for a primary surgical procedure was perfectly feasible and not necessarily dangerous.[21]

It becomes advisable to establish how frequently in a uterine specimen which has been exposed to irradiation therapy there are foci or extensive areas of radiation necrosis. Apparently, this task is not so easy. The majority of uteri exposed to radiation will remain within the patient at least during the most important time for recognition of this important pathologic alteration, namely, 3 to 5 months postirradiation. It is even more fascinating to establish the relationship between the degree of myometrial damage and subsequent functional and pathologic alteration of the neighboring organs and structures. Therefore, careful examination of any uterus which has been removed postirradiation is mandatory for the establishment of adequate statistical data. The lack of available pathologic and radiologic literature reports indicates that such specimens are very rare or myometrial radionecrosis has not been evaluated in a proper clinical light. Statements such as the "tolerance of the myometrium to irradiation is practically limitless" or "the myometrium will tolerate 20,000 r responding with simple atrophy" are arbitrary. Much more thorough investigation is necessary to understand the biologic processes occurring in the myometrium following irradiation and even more so if the myometrium has been hormonally stimulated, as in pregnancy, or surgically approached prior to irradiation.

Speculatively, a patient presenting such a degree of myometrial necrosis must have absorbed a considerable degree of irradiation in the area of the urinary bladder. From a radiobiologic standpoint it is conceivable that the necrotic process in the site of the hysterotomy scar was well advanced by the time of the second radium application. If this was indeed true, the second application of radium would have placed the radiation source much closer to the posterior wall of the bladder and would thereby make significant bladder injury much more likely.[9] There is no possible way to establish this, since there have been no dose measurements which might lend support to such a hypothesis; however, the presence of a sterile vesicouterine abcess as observed in this case strongly favors this modus.

Summary

A case of microcarcinoma of the cervix in the second trimester of pregnancy treated with extensive surgery and radiation as combination therapy has been presented. Extensive radionecrosis of the anterior wall of the uterus occurred as a result of the application of radium 10 days following hysterotomy.

The concept of microinvasive carcinoma has been stressed, especially from the standpoint of therapy. It appears that extensive surgical and radiation therapies exceed the actual treatment necessary for this special category of neoplasm.

Since the incidence of myometrial necrosis is not known and since there is wide opinion as to the amount of irradiation necessary to produce this pathologic alteration, it is important that such changes be properly documented and evaluated.

References

1. Fluhmann, F. C.: The Cervix Uteri and Its Diseases. Philadelphia: Saunders, 1961, pp. 363–7.
2. Johnson, W. D., and Weinfurtner, B. J.: Amer. J. Obstet. Gynec., 1950, **59,** 1189.
3. Kaufmann, C., Ober, K. G., and Huhn, F. O.: Geburtsh. Frauenheilk., 1965, **25,** 112.
4. Kimbrough, R. A., and Israel, S. L., in Pack, G. T., and Ariel, J. M., editors: Treatment of Cancer and Allied Diseases, vol. 6, 2nd ed. New York: Harper, 1962, pp. 330–4.
5. Lapid, L. S., Davids, A. M., and Gusberg, S. B., in Rovinsky, J. J., and Guttmacher, A. F., editors: Medical, Surgical and Gynecologic Complications of Pregnancy, 2nd ed. Baltimore: Williams & Wilkins, 1965, pp. 349–58.
6. Corscaden, J. A.: Gynecological Cancer, 3rd ed. Baltimore: Williams & Wilkins, 1962, p. 178.
7. McDuff, H. C., Carney, W. I., and Waterman, G. W.: Obstet. Gynec., 1956, **8,** 196.
8. Frick, H. C., Janovski, N. A., Gusberg, S. B., and Taylor, H. C.: Amer. J. Obstet. Gynec., 1963, **85,** 926.
9. Kickham, Ch. J. E.: J. Urol., 1958, **80,** 229.
10. Lewis, T. L. T.: Progress in Clinical Obstetrics and Gynecology. Boston: Little, 1964, p. 585.
11. Twombly, G. H.: Clin. Obstet. Gynec., 1963, **6,** 919.
12. Mestwerdt, G.: Atlas der Kolposkopie. Stuttgart: Gustav Fischer Verlag, 1961, pp. 112–35.
13. Browne, F. J., and McClure Brown, J. C.: Postgraduate Obstetrics and Gynecology, 3rd ed. Washington, D.C.: Butterworth's, 1964, p. 296.
14. Norman, O.: Acta Radiol., 1952, **37,** 96.
15. Twombly, G. H., in Pack, G. T., and Ariel, J. J., editors: See ref. 4, p. 322.
16. Sherman, A. I.: Cancer of the Female Reproductive Organs. St. Louis: Mosby, 1963, p. 237.
17. Gustafsson, D. C., and Kottmeier, H. L.: Acta Obstet. Gynec. Scand., 1962, **41,** 1.
18. Gray, M. J., and Kottmeier, H. L.: Amer. J. Obstet. Gynec., 1957, **74,** 1294.
19. Kottmeier, H. L.: Ibid., 1964, **88,** 854.
20. Eastman, N. J., and Hellman, L. M.: Williams' Obstetrics, 12th ed. New York: Appleton, 1961, pp. 494–7.
21. Moore, D. B., and Taylor, H. C., in Gray, L. A.: Dysplasia, Carcinoma in Situ and Microinvasive Carcinoma of the Cervix Uteri. Springfield, Ill.: Thomas, 1964, pp. 386–415.

Gonococcal Arthritis in Pregnancy—Niles and Lowe

(*Continued from page 70*)

Summary and Conclusions

Twenty-eight per cent of patients with gonococcal arthritis in our study were pregnant. The most common joint involved was the knee. All the patients responded to antibiotic therapy.

The usual finding of positive gonococcal cultures of 25 per cent from the synovial fluid was not present in our study, but there were 2 positive smears for gonococci out of 8 aspirations of the affected joint. Reiter's disease is the condition most often confused with gonococcal arthritis.

Although gonococcal infections are reportedly rare in pregnancy, when a pregnant patient appears with a symptom-complex of polyarticular pain, fever and joint swelling, gonococcal arthritis is the most likely diagnosis.

References

1. Eastman, N. J., and Hellman, L. M.: Williams' Obstetrics, 12th ed. New York: Appleton, 1961, pp. 788–9.
2. Harrison, T. R.: Principles of Internal Medicine. New York: McGraw-Hill, 1962, pp. 875–6.
3. Boyles, T. B., and Decker, J. C.: Proc. 1962 Annual Meeting of American Rheumatism Association. Bull. Rheum. Dis., 1962, **13,** 283.
4. Wright, V.: Arthritis associated with venereal diseases; a comparative study of gonococcal arthritis and Reiter's syndrome. Ann. Rheum. Dis., 1963, **22,** 77.
5. Lee, F. I., and Loeffler, F. E.: Gout and pregnancy. J. Obstet. Gynaec. Brit. Comm., 1962, **69,** 299.

Headache: Methysergide Therapy Complicated by Retroperitoneal Fibrosis

Report of a Case

DONALD A. JOHNSON, M.D., M.S., Ph.D.*, AND WILLIAM M. BALLINGER, M.D., F.A.C.P.†

METHYSERGIDE MALEATE (Sansert®) is a relatively new drug used in the treatment of headache. It is often prescribed for use over long periods of time, because headache is often a chronic problem. It appears that prolonged use of this drug may lead to the development of retroperitoneal fibrosis, in some patients.

Idiopathic retroperitoneal fibrosis is a recently recognized and relatively uncommon clinical entity. Albarran[1] is credited with the first report in 1905. Ormond[2] published the first report in the English literature in 1948—2 cases with clinical and histologic studies. Less than 100 cases could be gathered by Ormond[3] from the literature and from personal communications in a 1960 report.

The fibrotic process usually extends as a plaque from the brim of the pelvis upward to the renal pedicle and laterally to the ureters. It may extend beyond these limits or confine itself to a localized area within these boundaries. Grossly the tissue is firm, white or pink fibrous tissue. Microscopically the appearance is that of a nonsuppurative inflammatory process in fibrofatty tissue. Inflammatory cells may be conspicuous, or there may be a completely hyalinized fibrosis. Hache et al[4] have described the pathology as uniform in 30 cases studied following surgery or at necropsy.

In 1964 Graham[5] reported a series of 500 cases in which methysergide maleate was used in the treatment of headache. Two patients in this series developed retroperitoneal fibrosis while using the drug. A world-wide review failed to reveal any other cases at that time. However, in 1965 Utz et al[6] reported 3 more cases in which retroperitoneal fibrosis developed in patients using this drug. Another such case is the subject of this paper.

Report of Case

A 38-year-old man was admitted to Doctors Hospital complaining of pain, which at the time of its onset was located in the right lower quadrant of the abdomen, spreading to the right groin and the right testicle. The pain began 7 weeks prior to hospitalization and had gradually increased in intensity. The onset was abrupt, and the pain was continuous. Prolonged standing increased the distress. Recumbency did not relieve the pain, but sitting caused it to diminish to some degree, and the patient usually slept sitting a chair. There were no symptoms referable to the bowel or bladder.

The testicular pain ceased 1 week after onset. The pain gradually shifted from the right lower quadrant of the abdomen and the right groin to the flank, and then it became bilateral in the back, involving one or the other side with equal severity, or both sides simultaneously. The flank pain radiated as high as the costovertebral angle, and the complaint at the time of admission was backache.

Physical examination did not disclose any notable abnormality. The blood pressure was 160/90.

The hemoglobin was 11.6 Gm./per 100 ml. of blood. The red blood cell count was 3.0 million per cu. mm. of blood, the hematocrit was 37, and the leukocyte count was 8,500 with a normal differential count. Urinalysis was normal, and the serum amylase, lipase and phosphatases were within normal range.

The patient was seen in consultation by a general surgeon, who regarded his examination of the abdomen as negative and suggested a neurological evaluation. No abnormality was detected on this examination. However, in the course of the neurological history the patient mentioned that he had been taking methysergide maleate, 4 tablets daily for approximately 3 years, to control "migraine" headaches. The history of the use of this drug and the nature of the patient's complaints suggested the possibility of retroperitoneal fibrosis.

An excretory urogram showed marked delay in excretion of the dye and poor concentration of the dye in the right kidney, with hydronephrosis on the left side. A urological consultant concurred with the diagnosis of retroperitoneal fibrosis. Retrograde pyelography demonstrated bilateral hydronephrosis with dilatation of the ureters down to the level of the sacrum, confirming the diagnosis.

---

* In the private practice of neurological surgery at 915 19th Street, N.W., Washington, D. C. 20006.

† Clinical Professor of Medicine (Gastroenterology), Georgetown University School of Medicine.

Treatment by continuous ureteral catheter drainage and oral steroid therapy relieved the patient's symptoms promptly. An intravenous pyelogram 4 months later was within normal limits.

Discussion

A review of the use of drugs, current and past, is an important part of every medical history. Its value, of course, is directly proportional to the physician's fund of information regarding common and uncommon complications of drug therapy. The recognition of these complications is a difficult and rapidly expanding aspect of clinical practice. When the complicating syndrome is itself uncommon and difficult to diagnose early, the recognition of its relationship to drug therapy may be very difficult.

The etiology of retroperitoneal fibrosis is unknown. The presumptive relationship to methysergide maleate noted here applies to only 6 cases. A wide variety of inflammatory processes appears to have been responsible for retroperitoneal fibrosis in other reports.[4]

The fibrous process in the retroperitoneal space may appear without ureteral involvement, although the ureters are most vulnerable. The inferior vena cava, the aorta, or the iliac arteries may be involved. The lumbosacral plexus may be involved, and extension into the mesentery with colonic obstruction has been reported.

In the early stages pain is the only symptom. Usually the pain is experienced in the flanks, both lumbosacral regions, and the lower abdominal quadrants. Extension of the pain to the genitalia, perineum and anterior thighs is frequent. The posterior thighs are usually not affected. The pain may be dull or severe and is not altered by body position or function. Backache may be prominent and severe. Fever, leukocytosis, malaise, an elevated sedimentation rate, and lower abdominal tenderness may be present in varying degrees, or entirely absent.

In the past the process has been identified only in the late stage, usually by surgical exploration. Hache et al[4] divided the clinical syndrome into an early and a late stage and pointed out that recognition in the early stage is possible before irreparable renal damage has occurred. The symptoms of the late stage reflect increasing renal involvement or involvement of adjacent retroperitoneal structures.

The clinical symptoms of the early stage, with evidence of hydro-ureteronephrosis due to external pressure at the brim of the pelvis, are sufficient for a clinical diagnosis in the absence of evidence to suggest any other disease process. In this early stage, when an inflammatory element may be present, treatment with anti-inflammatory agents and temporary ureteral drainage may make surgical exploration unnecessary, as it did in this instance. The success of such treatment depends on early diagnosis.

Summary

A case of retroperitoneal fibrosis associated with the use of methysergide maleate has been reported. It is the sixth such case reported. The early symptoms of retroperitoneal fibrosis have been reviewed.

References

1. Albarran, J.: Rétention rénale par peruirétérite; libération externe de l'urétere. Proc.-Verb. Ass. franc. d'urol., 1905, **9**, 511.
2. Ormond, J. K.: Bilateral ureteral obstruction due to envelopment and compression by an inflammatory retroperitoneal process. J. Urol., 1948, **59**, 1072.
3. Ormond, J. K.: Idiopathic retroperitoneal fibrosis; an established clinical identity. J.A.M.A., 1960, **174**, 1561.
4. Hache, L., Utz, D. C., and Woolner, L. B.: Idiopathic fibrosis retroperitonitis. Surg. Gynec. Obstet., 1962, **115**, 737.
5. Graham, J. R.: Methysergide for prevention of headache; experience in five hundred patients over three years. New Eng. J. Med., 1964, **270**, 67.
6. Utz, D. C., Rooke, D. E., Spittell, J. A., and Bartholomew, L. G.: Methysergide and retroperitoneal fibrosis. J.A.M.A., 1965, **191**, 983.

PRESIDENT'S PAGE

THE REAPPEARANCE OF VENEREAL DISEASE

Those whose memories go back to the pre-antibiotic days recall the magnitude of the venereal disease problem. Not only were these diseases rampant, but more importantly the inadequacies of treatment, especially of gonorrhea and syphilis, resulted in a high rate of contagion. Almost overnight, it seemed, the problem was effectively controlled. Penicillin, and later a wide variety of antibiotics, reduced the problem to one of relatively minor proportion. Pelvic inflammatory disease, tabes dorsalis and gastric syphilis became pathologic curiosities.

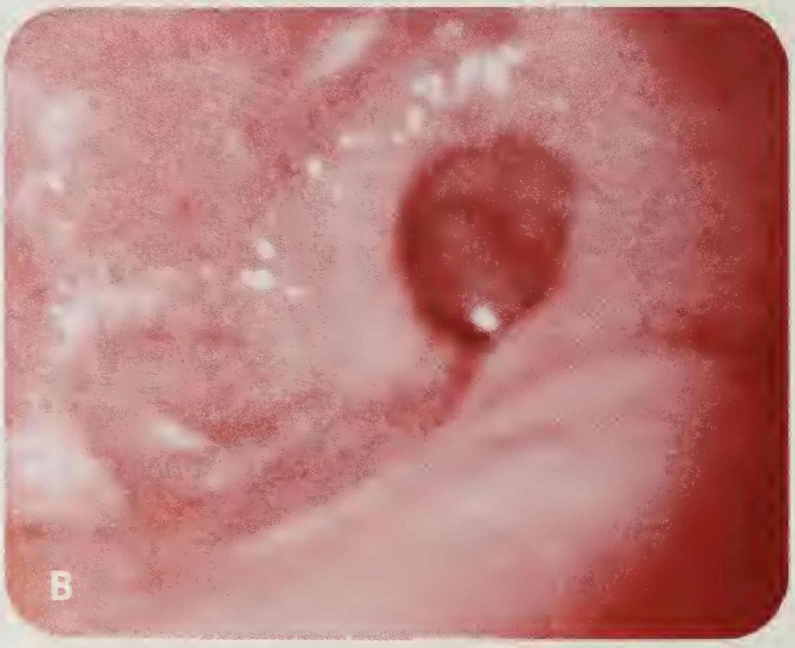
However, in recent years the reappearance of gonorrhea, syphilis and the less common venereal diseases has been as spectacular as their disappearance was 20 years ago. Whether this is due to acquired resistance of the offending organisms or to a relaxation of attentiveness on the part of physicians and health officials is debatable. But the important fact remains that the problem again must be faced and attacked with all available measures.

The Medical Society of the District of Columbia in concert with the Medico-Chirurgical Society and the District of Columbia Department of Public Health is sponsoring a featured "Venereal Disease Postgraduate Seminar for Physicians" on March 2 and 3, 1966 in the auditorium of the new D. C. Medical Society Building at 2007 Eye Street, N.W. The program to be presented during morning and afternoon sessions on both days will provide up-to-date, current coverage of modern advances in this field. To supplement this professional program a public meeting sponsored by the Social Hygiene Society of the District of Columbia will be held at 8:00 p.m. on March 2, 1966 for the benefit of groups allied with the medical profession and other interested individuals.

Apart from providing a visit to our new building, this timely program gives us an opportunity, which it behooves us to take advantage of, to reëducate ourselves about this growing menace.

Robert J Coffey

Which Is Pyloroplasty with Vagotomy?
Which Is Pro-Banthīne?



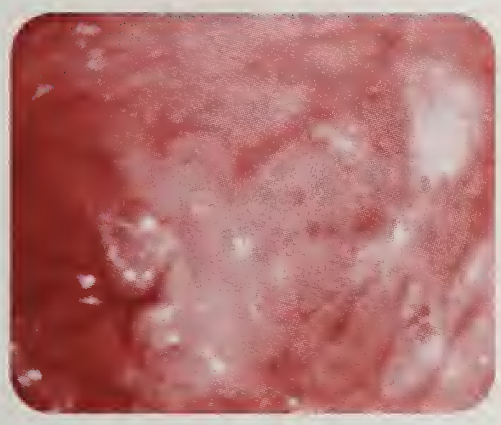
Photographs—Harry Barowsky, M.D., Lawrence Greene, M.D., and Robert Bennett, M.D., from a Scientific Exhibit presented at the Annual Meeting of the American College of Gastroenterology, Bar Harbour, Florida, Oct. 24-27, 1965.

Another example of

Pro-Banthīne®

(propantheline bromide)

a true anticholinergic in action



Normal relaxed pyloric antrum; contracted pylorus (pyloric fleurette)

The true anticholinergic values of Pro-Banthīne have never been so graphically realized as they are with the recent development of fibergastroscopy and the intragastric camera.

Pro-Banthīne consistently produces complete relaxation and immobility of the stomach with a dose of only 6 to 8 mg. intravenously. This is less than half the usual dose orally.

Atropine, on the other hand, required 0.8 mg. intravenously, or twice the normal dose, to achieve a similar effect. This high dose of atropine resulted in expectedly adverse side effects.

Pro-Banthīne, in minimal dosage, produces effects similar to pyloroplasty and vagotomy without the disadvantages of permanent post-vagotomy sequelae.

The intragastric photograph A is of a patient who has had pyloroplasty with vagotomy. Photograph B is of a patient given 6 mg. of Pro-Banthīne.

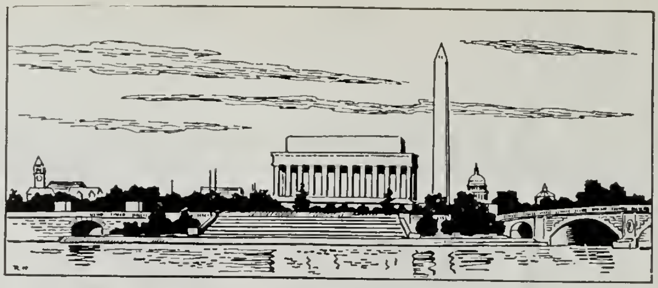
Indications: Peptic ulcer, functional hypermotility, irritable colon, pylorospasm and biliary dyskinesia.

Oral Dosage: The maximal tolerated dosage is usually the most effective. For most *adult* patients this will be four to six 15-mg. tablets daily in divided doses. In severe conditions as many as two tablets four to six times daily may be required. Pro-Banthīne (brand of propantheline bromide) is supplied as tablets of 15 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type ampuls of 30 mg.

Side Effects and Contraindications: Urinary hesitancy, xerostomia, mydriasis and, theoretically, a curare-like action may occur. Pro-Banthīne is contraindicated in patients with glaucoma, severe cardiac disease and prostatic hypertrophy.

SEARLE

Research in the Service of Medicine



EDITORIALS

The Modern Epidemic and the Physician's Choice

The grim data on mortality and on long-term prognosis in acute myocardial infarction emphasize the need for primary prevention, particularly for the early detection in susceptible individuals. This detection has become quite feasible now. Moreover, evidence is mounting to show that the risk factors involved are amenable to treatment. If these risk factors can be removed, modified or controlled, susceptibility may not only be reduced but, in some cases, even prevented. More intensive study is needed to test this hypothesis, and it is in this area that we ask your coöperation as physicians. From the scientific, the public health, and the medical practice points of view, such coöperation has become a compelling need.

In America at this time coronary artery heart disease alone kills 1 adult every minute. The annual total exceeds 528,000, representing twice our casualties in World War II. The impact of a disease that produces in excess of 1,500,000 acute myocardial infarctions each year with more than a 30 per cent mortality is tragic and, probably, needless.

We are properly expending time, money and talent in an attempt to reduce the mortality in the acute phase of myocardial infarction, particularly in the area of treating cardiogenic shock and the arrhythmias of the acute phase. This is accomplished very largely by means of our coronary intensive care units and by electronic monitoring devices. Here we are hoping for substantial results, and early reports seem to indicate that we are making some inroads into the mortality rate in the early hours of hospitalized cases.

Unfortunately, however, many do not survive the first attack. For some 17 or 18 per cent there isn't sufficient time to reach a hospital; and for another 17 or 18 per cent death occurs in the first few hours or in the first few days of hospitalization. Why wait for this stage of a disease which may possibly be prevented, modified or delayed, that is, interrupted somewhere, perhaps early in its course? While we are busy congratulating ourselves on the control of the infectious diseases, we have been losing ground to this new epidemic for close to 50 years. While our diagnostic acumen and our therapy have improved in the last 40 or 50 years, we have made little or no progress in arresting this devastating epidemic.

Hopeful signs, according to Dr. Paul D. White, are:

1. Research, such as the Framingham study.
2. The preventive attention paid to the young and middle-aged, including sensible advice on diet, weight control, smoking, early detection and control of diabetes, early detection, control and study of hypertension, adequate exercise, sensible advice on attitudes concerning the emotional aspects of life, periodic examinations, and other emphasis on the risk factors of this disease.
3. Education of the pediatrician. Pediatrics is a potentially fruitful area for the future since many believe that the risk factors should be applied not only to young adults but also to adolescents and perhaps even to the earliest years of life.

The uncertainty ahead may present something of a dilemma to the physician. Should he argue: "There is no proof—all the i's are not dotted and not all the t's are crossed; I have no responsibility"? Those who would hold this attitude must be willing to accept some degree of responsibility for the present high rate of premature coronary artery heart disease, because there is no reason to anticipate a spontaneous decline in that rate based on this "wait and see" or "judicious neglect" attitude. The other choice involves admitting that research such as the Framingham study offers the possibility of prevention and then putting

Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of the Medical Society of the District of Columbia

give...
so more will live
HEART
FUND

the results of that study into practice. There is little if any risk in this attitude. It involves, simply, good hygienic principles.

Dr. White has stated: "I believe it is our duty as physicians to try to prevent coronary heart attacks and to do all that we can to educate the public to the possibility of predicting and preventing or delaying them. If all of us make this our effort we may very well begin to see a drop in the morbidity and mortality from atherosclerosis before another generation has passed."

We are not attempting to attain immortality nor are we buying immunity, but as Samuel Johnson once noted: "Nothing will ever be attempted if all possible objections must first be overcome."

In conclusion, it should be made very clear that the risk factors we have discussed and the preselection of susceptible individuals apply to the stroke-prone as well as to the coronary-prone. The physician must be made aware of his ability and his responsibility in this area, and he must recognize the challenge it imposes in this serious contemporary health hazard which demands a preventive rather than an entirely therapeutic approach.

We ask your coöperation, as physicians, in the emphasis program of the American Heart Association to make the public increasingly aware of the risk factors and also in our efforts to determine the coronary-prone and stroke-prone individual.

John F. Finnegan, M.D.
President, Washington Heart Association

Meeting the Needs of Our Patients*

The time has long passed when the doctor worked alone in trying to meet the needs of patients. Those of you who have begun your clerkships are well aware that there are members of the faculty and of the house staff at several levels of experience and responsibility and that quite an organization of nurses, aides, technicians, dietitians, orderlies and cooks are involved in caring for the patients in the hospital. It is not very important how closely you follow such national developments as the fact that health is now the third largest industry in using manpower, ranking only behind agriculture and construction, or that there are now 10 times as many workers in the fields allied to medicine as there are doctors. But throughout your professional career your usefulness to your patients will depend in part on how effectively you work with colleagues in the medical profession and with all the others whose efforts contribute to the welfare of patients. With understanding and practice you can become effective at getting and giving the coöperation needed to get the best results for your patients and your community.

The ethical responsibilities of physicians were so well expressed by Hippocrates in 400 B.C. that it was not until 1803 that the Royal College of Physicians felt it necessary to have them restated in more specific terms. Since Hippocrates wrote in Ionian Greek, the oaths administered to most medical students in this country are transliterations of the same ideas—the welfare of patients as a prime concern; the protection of privacy and confidentiality; avoidance of injury and wrong; the sacredness of human life; and, finally, the oath or commitment: "These things I do promise and in proportion as I am faithful to this, my oath, may happiness and good repute be ever mine—the opposite if I shall be forsworn."

The responsibilities of every professional person can, I think, be understood more clearly by starting with the realization that practicing a profession is a privilege and not a right. That privilege is granted by society to certain individuals who have demonstrated that they have the integrity, the knowledge and skill required, and that the privilege may be withdrawn if it is used in a manner which society determines is not in its best interests. Medicine and certain other professions are so important to society that for many decades far better education has been provided than students could pay for in the form of tuition. A clear understanding of this responsibility to society can be obtained through serious thought, discussion and reading and will greatly help each of you as physicians to serve your patients and your community.

---

* From an address delivered at the Opening Assembly of George Washington University School of Medicine, September 13, 1965.

Dana Atchley has pointed out that the urge to give aid and comfort to one's fellow man who has suffered accident or injury must be very ancient and deep-seated. In the most ancient civilizations of which we have any record and in the most primitive societies someone is always found in the role of the healer. Sometimes called witch doctor, shaman or magician, these individuals played key roles in the lives of their fellow men. It is quite apparent that gifted healers bring some aid and comfort to their suffering fellow men, whether they understand the mechanism of the disease involved or not and whether the active methods of treatment they use are helpful or not, because in all societies patients seek their aid at some sacrifice to themselves.

Most of us begin the study of medicine because we too feel this ancient urge to be helpful to our fellow men when they are sick or injured as well as because of our thirst for knowledge of medical science. The habits and attitudes a physician develops will have the most profound effect in determining how useful to his patients the most important and consistently useful therapeutic agent in his armamentarium will be—the physician himself.

As the great Sir William Osler told the medical students of McGill in 1905, "In the student spirit you can best fulfill the high mission of our noble calling—in his humility, conscious of weakness while seeking strength; in his confidence, knowing the power while recognizing the limitations of his art; in his pride in the glorious heritage from which the greatest gifts to man have been derived; and in his sure and certain hope that the future holds for us richer blessings than the past."

Robert C. Berson, M.D.
Executive Director, Association of American Medical Colleges

Recruits Needed for Disaster Hospital

The District Health Department and the Office of Civil Defense have requested the coöperation of the D.C. Medical Society in staffing a Disaster Hospital to be stored in the Dupont Circle underpass.

This is a 200-bed hospital with generators, operating room, X-ray and laboratory equipment which is complete and able to function without additional supplies for a 30-day period. It could be set up in the 30,000 square feet available in the underpass or moved to another site if necessary.

It is to be used in the event of an atomic or natural disaster which would destroy or overload existing hospital facilities. Once established it would also be used as a model and training unit for similar hospitals in other areas.

The Executive Board of the Medical Society believes we should help all we can professionally. The Health Department and Civil Defense will be responsible for all supplies, equipment, food, water, maintenance, security and recruitment of nonprofessional personnel.

Your Committee on Emergency Medical Service now needs volunteer doctors and their office nurses, laboratory and X-ray technicians to staff the unit. Those located in the Dupont Circle area would be particularly welcomed.

The total amount of time needed to develop a smoothly running unit is expected to be 1 or 2 hours a month, from March through June 1966, then 3 or 4 hours per year for practice drills.

Surgeons, internists, general practitioners, anesthetists, roentgenologists, pathologists, administrators, dentists, nurses, and technicians are needed.

Those who are interested are urged to contact the undersigned through the offices of the Medical Society of the District of Columbia.

John W. Latimer, Jr., M.D.
Chairman, Committee on Emergency Medical Service

In the Chevy Chase Area
FOR THE BEST IN DRUGS AND SERVICE
IT'S
HIGGER'S
ESTABLISHED 1930

Complete Biological Stocks
HIGGER'S DRUGS, INC.
5015-17-19 Connecticut Avenue
Phone: Woodley 6-1815
Note: Special physicians' phone to Prescription Department: Woodley 6-5555

Proceedings of the Annual Business Meeting

Dr. Paul R. Wilner, President of the Medical Society of the District of Columbia, called the meeting to order on Sunday, November 21, 1965 at 3:15 p.m.

In Memoriam to Deceased Members

The President requested those present to rise and remain standing while he read the names of 32 members who had died during the past year. They are:

Alexander, Samuel A. (Life)—September 22, 1965
Chow, Charles C-T. (Associate)—August 1, 1965
Cockerille, L. Lee (Active)—January 27, 1965
Courtney, Francis X. (Life)—September 29, 1965
Dunmire, Roy F. (Life)—March 17, 1965
Eanet, Paul (Special)—September 25, 1965
Eisenberg, Herman (Associate)—November 20, 1965
Everding, Charles J. (Associate)—December 6, 1964
Franzoni, Fred Royce (Associate)—August 22, 1965
Gaffney, Leo B. (Active)—October 24, 1965
Gathings, Joseph G. (Active)—June 28, 1965
Goodman, Melvin O. (Active)—February 6, 1965
Gordon, Samuel C. (Active)—September 13, 1965
Gray, A. Clagett (Life)—November 25, 1964
Hardesty, William S. (Life)—August 26, 1965
Harris, Joseph (Special)—October 19, 1965
Hopkins, Jesse B. (Active)—February 9, 1965
Jardeleza, Magdaleno L. (Associate)—January 6, 1965
Kain, Helen G. (Life)—April 27, 1965
Lawrence, Joseph S. (Life)—July 18, 1965
Miller, Clarence L. (Active)—January 29, 1965
Monat, Henry A. (Active)—January 25, 1965
Odenwald, Robert P. (Special)—July 17, 1965
Price, Carlton N. (Special)—March 1, 1965
Price, Walter W. (Life)—February 1, 1965
Raedy, J. Raymond (Active)—January 27, 1965
Roll, Rufus M. (Active)—August 4, 1965
Rude, Gilbert E. (Active)—January 27, 1965
Selinger, Maurice A. (Life)—August 26, 1965
Silvester, Richard L. (Life)—November 23, 1964
Thomas, Joseph S. W. (Active)—December 23, 1964
Wilcox, Blanche B. (Associate)—August 25, 1964

Annual Reports*

The report of the Executive Board, prepared by the Chairman, Dr. Duane C. Richtmeyer, had been mailed to the membership with the agenda. At this time, Dr. Wilner called on Dr. Richtmeyer to review this report.

Section on Obstetrics and Gynecology: On a motion made, seconded, and carried a new Section on Obstetrics and Gynecology was approved, thus bringing the total number of sections to 19.

Guidelines for Fee Review Committee: Dr. Richtmeyer briefly reviewed the purpose of these guidelines and moved their approval. Dr. Wilner called for a second, asked for discussion, and then for a vote. The vote was unanimous in favor of approving the guidelines for the Fee Review Committee.

Changes in Constitution and By-laws: Dr. Richtmeyer presented 4 proposed changes:

1. Chapter II, Article I, amended to add the following sentence after the first paragraph: "Requests for change in membership classification shall be referred to the Board of Credentials. The Board of Credentials shall establish its own procedure for processing such requests."

2. A proposed change to further clarify Associate membership was referred back to the Committee on Constituion and By-laws.

3. Chapter IV, Article I, Section 4 was amended to change the dues of Associate members from $15 to $30 per annum.

4. In Chapter IV, Article III the last sentence was amended to read: "A member so dropped [for nonpayment of dues] or who leaves the Society voluntarily may be reinstated by the Executive Board, provided all dues for the last year in which the doctor was a member are paid in full."

Commenting further on the Constitution and By-laws, Dr. Richtmeyer recommended that the following 2 items be referred to the Committee on Constitution and By-laws:

A. The possibility of purchasing a membership for life for those members who might wish to do so, thus eliminating the paying of dues each year;

B. Adding a provision for a vote by proxy which could be given to the Executive Board and which would be included in establishing a quorum.

Proposed Budget—1966: Dr. Richtmeyer referred to a new and more detailed copy of the proposed budget distributed at this meeting and moved that the budget be approved. During discussion the Secretary-Treasurer was asked to explain several items in the proposed budget and to quote the amount of his yearly salary. This the Secretary-Treasurer did, stating that the salary was $18,000. Following this Dr. Wilner called for a vote and the proposed budget for 1966 was approved.

Nominations to Board of Trustees of Medical Service of D. C.: Dr. Richtmeyer presented the

---

* The reports of the Chairman of the Executive Board, the Board of Credentials, and the Secretary-Treasurer, and the proposed budget for 1966 were published in the January issue of the Medical Annals.

Taking an ECG?
Complete the clinical picture
with **a heart sound recording**

. . . made on your 500 VISO when you take the ECG

Increase your knowledge of cardiac condition with the valuable *additional* information provided by heart *sound* recordings. With this new Sanborn Heart Sound Amplifier clipped to the front of your 500 VISO* you can immediately obtain clear, sharply defined, graphic records — which identify the *location, intensity* and *duration* of the sounds and murmurs within the cardiac cycle. Even in the presence of complex arrythmias, marked tachycardias and other conditions which may complicate or prevent accurate auscultation by stethoscope alone, a definitive record of diagnostic quality can be obtained with this new instrument. Frequency cutoffs of 50, 100, 250 and 500 cps can be switch-selected to separate murmurs which might otherwise be masked by other heart sounds. As an electronic stethoscope, all sounds from 50 to 2000 cps can be heard at normal or amplified levels.

This precise Sanborn amplifier has convenient controls for recording the ECG, PCG, or ECG superimposed on the PCG . . . Cutoff Frequency . . . Audiophone Volume . . . and Sensitivity. Complete with contact microphone, cable and Audiophone (for use as an electronic stethoscope), Model 1506A is $450 f.o.b. Waltham, Mass. (continental U.S.). For more information, use the convenient coupon below. Sanborn Division, Hewlett-Packard Company, Waltham, Mass. 02154. In Europe, Hewlett-Packard S.A., 54 Route des Acacias, Geneva.

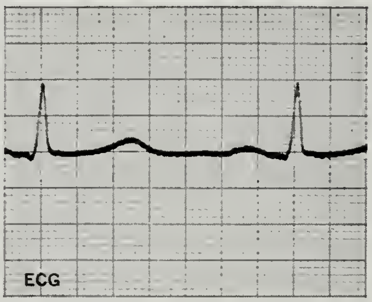
**or almost any other ECG with a 50 mm/sec. chart speed.*

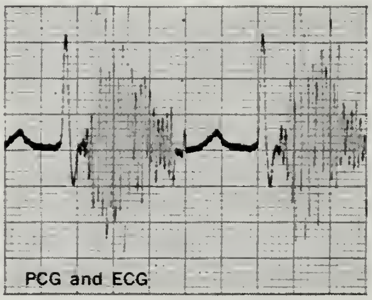
2R1

☐ Send detailed specifications on Sanborn 1506A Heart Sound Amplifier.
☐ Have HP/Sanborn Field Office call me for an appointment.

(address) (phone)

(city) (state) (zip code)





HEWLETT
PACKARD hp SANBORN
DIVISION

following nominees to serve on the Board of Trustees of Medical Service of the District of Columbia for 3-year terms:

Edward W. Nicklas, to replace Henry L. Darner
C. Willard Camalier, to succeed himself
Alfred A. J. Den, to succeed himself

Dr. Wilner called for additional nominations from the floor; there being none, the nominations were closed.

Nominations to the Board of Trustees of Group Hospitalization, Inc.: Dr. Richtmeyer presented the following nominee to serve on the Board of Trustees of GHI:

Brooks G. Brown, to succeed himself

Dr. Wilner called for additional nominations from the floor. There being none, the nominations were closed.

Nominations for Honorary Membership: Dr. Richtmeyer presented the following nominees for Honorary membership: Mr. Theodore Wiprud and Rear Admiral Robert B. Brown. On a motion from the floor, the Secretary was advised to cast a unanimous ballot for both nominees.

Dr. Richtmeyer, in concluding his report, expressed his appreciation to the membership for its coöperation.

Report of the Board of Credentials

The Chairman referred briefly to the Report of the Board of Credentials.

Confirmation of Applicants for Membership: The Chairman called for a vote on the members who had been elected by the Executive Board for a probationary period of 1 year. On a motion, which was carried, 78 Active, 44 Associate, 11 Resident-Intern and 2 Honorary members were elected to permanent membership.

Report of the Secretary-Treasurer

The Secretary presented the Report of the Secretary-Treasurer, which was for information only.

Report of the Nominating Committee

Dr. Wilner called upon Dr. Henry L. Darner, Chairman of the Nominating Committee, to present the report of his Committee. Other members of the Nominating Committee were: Drs. Ralph M. Caulk, Calvin T. Klopp, Harold M. Hobart, William E. Bageant, James A. Curtin, and Russell M. Tilley.

Dr. Darner submitted the following nominees for office:

Henry D. Ecker, President-elect
Lawrence A. Rapee, First Vice President
Claudine M. Gay, Second Vice President
Paul R. Wilner, member of Executive Board for a 4-year term
William S. Cole and Edward E. Ferguson, members of Board of Credentials for 3-year terms
C. Willard Camalier, Jr., Delegate to AMA for a 2-year term
Thomas M. Peery, Alternate Delegate to AMA for a 2-year term

On a motion from the floor the Secretary was instructed to cast a unanimous ballot for all nominees.

Dr. Wilner introduced the electees and asked each one to rise and be recognized.

Presentation of Certificate of Appreciation

Dr. Wilner presented the Society's Certificate of Appreciation to Dr. Edward W. Nicklas for his service as President in 1964.

Presentation of Gavel to Outgoing President

Dr. Richtmeyer stepped to the podium and presented an inscribed gavel to Dr. Wilner whose term as President will terminate December 31, 1965.

At this time the Chairman called upon Dr. Robert J. Coffey for a few remarks. As incoming President, beginning January 1, 1966, Dr. Coffey spoke briefly on his plans for the year, assuring that he would give the time necessary to do the task and calling for the coöperation of the membership.

Other Business

The Chairman asked the Secretary to read the following from the Section on General Surgery:

"In view of the fact that the Section on General Surgery questions the action of the Executive Board in respect to an insurance carrier for Medicare as being a consensus of the feeling of a majority of the members of the Society, it is respectfully requested that this question be placed on the agenda for the Annual Meeting of the Society on November 21, 1965."

A motion was made and seconded that the membership express confidence in the Executive Board's action and approve its action in recommending Medical Service of the District of Columbia as the carrier for Part B of Section XVIII of P.L. 89–97 if only 1 carrier is to be selected.

There was considerable discussion concerning this subject and Dr. Donald Stubbs was asked

When tetracycline is indicated in these candidates for Candida...

New low-cost tetracycline/antifungal therapy

Tetrex®-F

tetracycline
phosphate complex
–nystatin

Because new Tetrex-F (tetracycline phosphate complex-nystatin) is the most economical therapy of its kind that you can prescribe, it is a sound choice whenever tetracycline therapy is indicated in patients predisposed to monilial infections.

Who are these "candidates for Candida"?

1. diabetic patients
2. nonpregnant women with a history of recent or recurrent monilial vaginitis
3. elderly or debilitated patients
4. patients with a past history of moniliasis
5. patients on long-term tetracycline or corticosteroid therapy.

For these patients, Tetrex-F (tetracycline phosphate complex-nystatin) provides efficient tetracycline therapy against a broad range of infections *plus* protection against superinfection associated with the overgrowth of *C. albicans* in the G.I. tract.

Priced for savings

Tetrex-F (tetracycline phosphate complex-nystatin) is lowest in cost—priced 20% lower than most tetracycline/antifungal products.

BRISTOL THERAPEUTIC SUMMARY

For complete information consult Official Package Circular.
Indications: Infections of respiratory, gastrointestinal and genitourinary tracts and skin and soft tissues due to tetracycline-sensitive organisms, in patients with increased susceptibility to monilial infections.
Contraindications: The drug is contraindicated in patients hypersensitive to its components.
Warnings: Photodynamic reactions have been produced by tetracyclines. Natural and artificial sunlight should be avoided during therapy. Stop treatment if skin discomfort occurs. No cases of photosensitivity have been reported with Tetrex (tetracycline phosphate complex). With renal impairment, systemic accumulation and hepatotoxicity may occur. In this situation, lower doses should be used. Tooth staining and enamel hypoplasia may be induced during tooth development (last trimester of pregnancy, neonatal period and childhood).
Precautions: Bacterial superinfection may occur. Infants may develop increased intracranial pressure with bulging fontanels. In gonorrheal therapy, serologic tests for syphilis should be conducted initially and monthly for 3 months.
Adverse Reactions: Glossitis, stomatitis, nausea, diarrhea, flatulence, proctitis, vaginitis, dermatitis, and allergic reactions may occur.
Usual Adult Dosage: 1 capsule q.i.d. Continue therapy for 10 days in beta-hemolytic streptococcal infections. Administer one hour before or 2 hours after meals.
Supply: Capsules, bottles of 16. Each capsule contains tetracycline phosphate complex equivalent to 250 mg. tetracycline HCl activity and 250,000 units of nystatin. Oral Suspension, 60-ml. bottle. Each 5 ml. contains tetracycline equivalent to 125 mg. tetracycline hydrochloride and nystatin, 125,000 units.

BRISTOL

BRISTOL LABORATORIES
Division of Bristol-Myers Co.
Syracuse, New York

to explain portions of P.L. 89-97 and what might be expected of "a carrier" as mentioned above. Following the discussion the Chairman called for a vote, which was unanimous in favor of the motion supporting the Executive Board.

There was also discussion of a letter written to the Secretary by Dr. Milton C. Cobey. This concerned the multiplicity of hospital staff meetings required by the Joint Commission on Accreditation of Hospitals and the feasibility of seeking credit for attendance at Medical Society Sectional meetings in lieu of required attendance at hospital staff meetings. The suggestion was made that the delegates to the AMA look into the possibiity of offering a resolution to accomplish such an objective.

After the meeting adjourned many members gathered in the Library for refreshments and a social hour. This was the last membership gathering in the 1718 M Street Building.

Report on 1965 Clinical Meeting of AMA House of Delegates

A TREMENDOUS AMOUNT OF WORK was presented to the House of Delegates at the Clinical Convention in Philadelphia, November 28–December 1, and action was completed on a large number of items. In the interest of conciseness only those items of general interest will be included in this report.

Resolution C-6, introduced by the District of Columbia, would have increased the requirements for calling a special session of the House, but it was not approved.

AMA-ERF report showed that the Loan Guarantee Program for students, interns, and residents has passed the $3,000,000 mark and that for the seventh year more than $1,000,000 has gone to medical schools.

The Gundersen Report relating to internal reorganization of the House of Delegates underwent a great deal of amendment as well as defeat of some of its proposals. In general, the House refuses to delegate or to give up any of its powers to any committees or to the Board of Trustees.

The report of the Committee on Human Reproduction, so ably chaired by your senior delegate, Dr. Holden, was presented through the Trustees to the House. In essence, this report pointed out the variance in state laws concerning abortion, sterilization, and contraception and called for uniformity of these laws. After a bitter and emotional debate the entire report was referred back to the Trustees and it was suggested that conferences be held with other interested groups on these subjects.

After a lengthy discussion of the "prevailing fee concept" as opposed to the one of "usual and customary fee," the House reaffirmed its support of the "usual and customary fee" and urged that this concept be brought to the attention of all third parties in medical insurance.

Based on increased expenses the House of Delegates by a divided vote concurred in a Board of Trustees' recommendation that annual dues for AMA membership be increased by $25.00 to a total of $70.00 annually. This is subject to final action at the Convention in June 1966.

Other actions involved the relationship between hospitals and hospital-based specialists and called for the separation of professional and technical charges. Uniform cost accounting and billing in hospitals was recommended. Adequate physician representation on state Hill-Burton hospital advisory councils was requested.

Respectfully submitted,
RAYMOND T. HOLDEN, M.D.,
Delegate
C. WILLARD CAMALIER, JR., M.D.,
Delegate

Physicians—

ATTENTION!

Now ready for occupancy

BOULEVARD MEDICAL CENTER

8301 Arlington Blvd. (Rte. 50)

—Just west of Gallows Road

—Just west of Rte. 495

—Adjacent to Fairfax Hospital

In the heart of Northern Virginia's "hottest" growth area!

Leasing information:

Mr. Appel, 527-6660

Pomponio Properties, Inc.

The Washington Society of Pathologists—A Historical Sketch*

COLONEL JAMES E. ASH, M.C., U.S.A. (RETIRED)
Rockville, Maryland

In the beginning no one thought of a Washington Society of Pathologists. When it became evident to the sensorium, it had already evolved as a sort of spontaneous convenience within the old Army Medical Museum. Its history, therefore, can be understood only as a continuing, intimate association of the 2 organizations. In retrospect we can become oriented by outlining 3 eras in this intermingled history:

1. Prehistoric, early 1920's–1937. This includes the nebulous beginnings of the Society after World War I and proceeds through a vigorous and disorganized phase that picked up accelerated momentum during World War II. Throughout this era the Society always met at the old Army Medical Museum at Seventh Street and Independence Avenue, S.W., Washington, D. C.

2. Medieval, 1937–1947. This era begins with the incorporation of the Society and closes with the time when things began to return to normal after the close of World War II. The meetings continued to be held at the old Army Medical Museum, which became the Army Institute of Pathology during this period. There are few records available for either of these earlier phases of the Society.

3. Contemporary, 1947 to the present. A more regulated organization now settled into a steadier pace. The meeting place moved out to the Walter Reed Army Medical Center, as did the Army Institute of Pathology, with both organizations evolving into a larger dignity.

These 3 eras of the Society were rooted and nourished in several concurrent developments in medicine in Washington: the remarkable expansion of the Army Medical Museum into the present Armed Forces Institute of Pathology; the emerging of the old Hygienic Laboratory of the United States Public Health Service into the present National Institutes of Health; the scientific developments at the Walter Reed Army Medical Center, the Naval Medical Center and the Veterans Administration; and the growth of Washington's 3 medical schools.

Prehistoric—Early 1920's to 1937

With this broad outline in mind we return to the beginning of the Society within the Army Medical Museum in the early 1920's, and, as the Society was a natural offshoot of the Museum, we must begin even farther back, with a few words about the Museum's history.

This world-famed institution, now centennial, started during the Civil War as a collection of material of interest to military medicine. It became the first research and teaching center for the Army Medical Corps and developed under such distinguished figures as Woodward, Billings, Walter Reed, and Russell.[1]

Pathologic anatomy at the Museum during these early years was capably handled by Dr. Daniel S. Lamb, a very remarkable man. He began as a hospital steward at the Museum and continued on under various titles, meanwhile obtaining an M.D. degree at Georgetown University and teaching at the local medical schools, especially at Howard University. His service to the Museum extended over 55 years following the Civil War, and during much of this long period he was the only anatomic pathologist in the Washington area.

And it must be noted that, during this period also, pathologic anatomy was not the primary commitment of the Museum. The collections were then in the "pickle-factory" stage, being collections only, and of a minimal concern scientifically. The Museum was at that time primarily an activity of the Army Medical School, and in this aspect it was the center of the now famous pursuits of Walter Reed, especially in yellow fever, and the other outstanding contributions of the Army Medical Corps to general medical knowledge. These early giants at the Museum were not especially interested in pathologic anatomy nor in the collections, except as the official custodians. Dr. Lamb functioned essentially as a civilian and went his own way among the military men after he received his medical degree.

With the close of World War I there came a sharp change in the Museum's activities. Now for the first time, in 1919, there was assigned as the Museum's Curator a Medical Corps Officer who had had formal training in pathology before entering the Army. As Dr. Lamb was terminating his long years of service, Major (now General) George R. Callender began his significant command, which was rapidly to direct the Museum into the path that has made it unique as a research center in anatomic pathology.

---

* This effort was inspired by a request from Dr. Marvin A. Jackson, Professor of Pathology, Howard University College of Medicine, and the contemporary President of the Society.

[1] Henry, R. S.: AFIP Story; Its First Centennial. Washington, D. C.: U. S. Government Printing Office, 1964.

It was at this point, in the early 1920's, that the Washington Society of Pathologists began to crystallize from its initially amorphous state. Now, for the first time, the Museum had a pathologist as Curator. Now, too, Washington itself had several pathologists, augmenting the unique Dr. Lamb. It was natural that these men should frequent the Museum, to consult and be consoled by the capable, genial Callender. Such occasional visits soon became a hazy habit of regular meetings on Saturday afternoons to discuss interesting or puzzling cases. From this time on the Curators were always Army medical officers of more than casual experience and training in pathology; each in turn became host and arbiter for these informal gatherings.

Then, during the 1920's, the Museum's staff of pathologists began to grow, and in a curious fashion. Since the curatorial term was a limited 4 years, in 1922 Callender was succeeded by Major James Coupal, who served at the same time as Personal Physician to President Coolidge, pursuing his dual role with a microscope in one hand and a private telephone to the White House in the other. When Coupal's term ran out Callender swung back into position as his replacement. By 1928 both Callender and Coupal remained physically present at the Museum, like ghosts in reverse, being officially and on paper at assignments elsewhere. So it was that they were joined by the new Curator, James E. Ash. Other Army pathologists were soon added to the staff, including the very energetic and able Paul McNabb; James B. Mann, a dental officer with a particular penchant for dental pathology; Raymond O. Dart, who would later become one of the distinguished Directors of the Armed Forces Institute of Pathology; Elbert DeCoursey, a dynamic Young Turk who was to be another Director and also very active in the subsequent development of the Institute.

Around this nucleus of Regular Army Officers on duty at the Museum the local pathologists rallied to contribute faithfully at the informal gatherings. Among them were:

Walter Freeman, at that time pathologist at St. Elizabeths Hospital
Oscar B. Hunter, Sr., Professor of Pathology at George Washington University Medical School
Eugene Whitmore, formerly Army Major, then Professor at Georgetown University Medical School
Tomas Cajigas, George Washington Hospital
Otis Wildman, United States Naval Hospital
Vincent Darden, Georgetown University Hospital
Lester Neuman, Emergency Hospital
Maurice A. Selinger, Clarence Rice and J. W. Lindsay, all at Garfield and Children's Hospitals
H. H. Leffler, Providence Hospital
Ralph Lillie, United States Public Health Service
Wallace M. Yater, a pathologist as well as an internist from Georgetown University Medical School
Roger Choisser, formerly in the Navy, and at that time pathologist at the Old Naval Hospital on 22nd Street (later Professor of Pathology at George Washington University Medical School)
Thomas M. Peery, now Professor of Pathology at George Washington University Medical School
Arthur Nelson, Louis Ashburn, John Harper, and Kenneth Endicott, all with the United States Public Health Service.

The chronicle of those early years depends on the hazy and nostalgic memories of the author and his associates of those years who are still available. There was, early in 1927, an organizational meeting of the Society. George Callender and Clarence Rice prepared the first Constitution and By-laws (these documents cannot now be located). Dr. Rice was the first President and Major Dart the first Secretary. The dues were fixed at $1.00 a year.

Following this organization the meetings continued informal in nature, with very little routine business transacted, and there are no minutes available now. There was at least 1 meeting a month, held on a Saturday afternoon, and, as before organization, the programs consisted of individual slides presented by pathologists from the local civilian and Government hospitals. All of these cases were accessioned in the Museum files, and the difficult ones were referred to civilian consultants throughout the country who were available to the Museum. In late 1928 and early 1929 the students at the Army Medical School, at that time quartered at Walter Reed Hospital, began attending the meetings. Among these young Army officers was Harold L. Stewart, who was later to become an important figure in the Society.

In 1929 also there began a modest influx of medical scientists to Washington. The first of note was the famous Ludwig Hektoen of Chicago, who came as Chairman of the Committee on Pathology at the National Research Council. He frequently visited the Museum and occasionally attended our Saturday meetings. In 1930 he was succeeded

THE WASHINGTON SOCIETY OF PATHOLOGISTS, in one of its more serious moods, in the tissue laboratory of the old Army Medical Museum, April 1939. (U. S. Army Medical Museum neg. no. 68086)

by Howard T. Karsner, then Professor of Pathology at Western Reserve University Medical School. In this way Karsner began his long and important service to the Museum and its successor, the Armed Forces Institute of Pathology.

During the thirties the Society continued much the same. Among the newcomers who joined with us then were:

Joseph G. Pasternak, who was with Lillie at the Public Health Laboratory from 1931 to 1936

Thomas F. Crahan, Benjamin Highman, Kenneth Endicott, Thomas M. Tomlinson, John Miller, Theodore L. Perrin, and Chapman H. Binford, all with the Public Health Service and National Institutes of Health

Arthur A. Nelson, at the Public Health Laboratory until 1939, when he transferred to the Food and Drug Administration

E. E. Smith and John Shaver, United States Naval Hospital (Captain Shaver was more recently Commanding Officer of the Naval Medical School and is at present Director of Laboratories at Suburban Hospital in Bethesda).

The succeeding Curators at the Museum who were hosts and active in the affairs of the Society during the remainder of this first period are chronologically as follows:

1928–31: James E. Ash
1931–32: Paul McNabb (deceased)
1932–33: Virgil Cornell (deceased)
1934–36: Raymond O. Dart
1936 (July)–1937 (February): Hugh A. Gilmore
1937–47: James E. Ash.

Medieval—1937–1951

The second era of the Society began with the presidency of Dr. Oscar B. Hunter, Sr., 1937–38. Even before assuming office in June Dr. Hunter arranged for the incorporation of the Society. The Certificate of Incorporation was dated March 15, 1937; it was recorded on April 2, 1937 in the office of the Superintendent of Corporations, Washington, D. C. It reads as follows:

1. Name: "The Washington Society of Pathologists, Inc."
2. Term for which it is organized shall be perpetual.
3. The particular business and objects of said corporation shall be:
    I. To promote interest in the study of Pathology in the City of Washington.
    II. To encourage the demonstration of Pathology to the end that clinical interest in this subject may be increased.
    III. To further the ideals and ethics of the medical profession and the high standards of medical education in the United States.
    IV. To receive and administer funds through dues, grants-in-aid, gifts and other sources to support definite projects related to the purposes and aims of the Society.

Address: Army Medical Museum

Signed by Roger M. Choisser, Janvier W. Lindsay, Elbert DeCoursey, Lester Neuman, and Oscar B. Hunter, Sr.

The officers at this time were Roger M. Choisser, President, and Captain Elbert DeCoursey, Secretary-Treasurer.

A second "First Constitution and By-laws" was adopted on April 29, 1937. The original Constitution of 1927 had evaporated and apparently been forgotten. The new Constitution reflected the growing sophistication of the Society for it now established 4 types of membership: Active, Associate, Honorary and Corresponding.

An increased sophistication in activity and putative influence also appeared, when the Society, on May 7, 1938, adopted the following resolution:

"The Washington Society of Pathologists earnestly urges the passage of Senate Bill 3919 and House Bill 10,455 that provide for the erection of a new structure in Washington to house the Army Medical Museum and Library; *and*

"*Be it further resolved*, That this resolution be forwarded to Senator Morris Sheppard and to Representative A. J. May."

This effort was in vain, though it was one of many put forth by interested persons and organizations throughout the country, as well as by several Surgeons General of the Army, to obtain proper housing for the unique collections of medical material and literature that had accumulated in the old Museum building. It is just as well, no doubt, that these early efforts did fail. Otherwise we should probably now be stuck with an inadequate building which might have inhibited the fruition of the National Medical Library on the one hand and the Armed Forces Institute of Pathology on the other. Even so, the final separation of these 2 institutions remains a heartache to those of us of the Old Army who took such pride in bragging that one roof sheltered the world's largest accumulations of medical literature and of pathologic specimens.

In 1938, as further witness to the Society's sophistication, our dynamic President, Dr. Hunter, drafted a Resolution and Constituion and By-laws for the establishment of the American Academy of Pathology (sic). These were approved by the Society and then circulated among the national societies of pathologists. Thus began a movement that resulted a year or so later in the formation of the College of American Pathologists, today so important to the pathologists in this country, and a tribute to the foresight, deep interest, and organizational ability of Dr. Hunter.

In this new era of incorporation and widening horizons the Society's meetings now became more formal and were attended by a wider group, drawn at this time from all over the country. This was due partly to the expanding of the local Government institutions and reflected particularly a development of the Army Medical Museum itself in the early forties, under the special pressures of war.

Within the Museum the pace was stepped up greatly, with the staff on a 7-day-a-week basis, and large numbers of civilian pathologists being inducted into the Army. It now became necessary to indoctrinate these men in military matters, and especially in tropical diseases, as our armed forces spread out world-wide into unaccustomed climates. Pathologists came through the Museum in a steady flow, and a constant rotation of consultants of professorial caliber considerably elevated the professional tone. These men participated in the Museum's daily slide discussions and gave lectures on subjects in which they themselves were authorities. The sessions met in the more formal lecture room now installed in the Museum, and also drew members of our Society. In fact, it became customary for the local group to come practically every Saturday afternoon. During this hectic time the rationing of gasoline impeded attendance at the meetings, especially after the National Institutes of Health moved to Bethesda in 1941.

A detailed look at the Society during this vivid period (as of November of 1940) reveals a membership of 43. The President was Eugene Ragle, Captain, U. S. Navy; the Vice President was V. J. Darden; and the Secretary-Treasurer was Virgil H. Cornell, U. S. Army, pathologist at Walter Reed Hospital. Dues were still $1.00 a year. Among the active participants at this time were:

Harold L. Stewart, who had left the Army and joined the National Cancer Institute in 1939 and is now Chief, Laboratory of Pathology at the Clinical Center
Hugh Grady, National Cancer Institute, later an Army medical officer with the Museum, and now Professor of Pathology at Seton Hall Medical School, Jersey City, New Jersey
Robert S. Jason, then Professor of Pathology, Howard University College of Medicine and now Dean of that school
Stuart Lippincott, then at the National Cancer Institute, later with the Museum
Jesse Edwards, National Cancer Institute, later with the Museum and now at the Charles R. Miller Hospital, St. Paul, Minnesota
Charles G. Aronstein, Emergency Hospital
Pearl B. Holly, one of the first local hematologists.

Attendance at meetings was not restricted to pathologists, and among the local clinicians who were welcomed and who participated in meetings at this time were:

Benjamin Manchester, cardiologist
Richard Kearny, otolaryngologist

Margaret Nicholson, pediatrician
Jeanne Bateman, oncologist
Robert Groh, neurologist.

Among new members of the staff at the Museum were:

- Balduin Lucké, Assistant Director of the Army Institute of Pathology; Professor of Pathology at the University of Pennsylvania Medical School (deceased)
- Alfred Golden, an executive officer at the Museum, and now pathologist at the Jennings Memorial Hospital in Detroit
- Ralph Thompson, now at Alexandria Hospital, Virginia
- Robert Cavanaugh, now Director of the Maryland State Public Health Laboratories.

The year 1941 stands out as a real landmark in the Society's history. This was the year when it arranged for the first time a type of program that has become a distinguished feature of the meetings of the National Societies of Pathologists, the slide seminar. And it was a double innovation, being not only the slide seminar itself, but the beginning of the still current custom of holding joint meetings with other societies, this first time with the Baltimore Society of Pathologists. In February of 1941 the 2 societies presented at the D. C. Medical Society building the slide seminar on "Tumors of the Skin." This was conducted by Arthur C. Allen, who had come to the Museum from the Memorial Hospital in New York. Dr. Allen was assisted by Colonel James E. Ash and Elson B. Helwig, Chief of Dermal Pathology at the Museum, a position which he has continued to hold with great distinction and where he is Chief of the Pathology Division of the A.F.I.P. One hundred and fifty attended this meeting, including a number of local dermatologists. Because of the vicissitudes of the War, however, it was not until 1947 that it was possible to organize a similar symposium. Then in April of 1947 Emil Novak, the noted Baltimore gynecologist and Director of the Registry of Ovarian Tumors, moderated the presentation of a selection of ovarian tumors from the files of the Army Institute of Pathology. In October of 1947 our Society and the Baltimore Society of Pathologists, at a joint meeting, sponsored a seminar on bone tumors conducted by Granville Bennett, Professor of Pathology at the University of Chicago Medical School.

Another milestone was passed in this year of 1947, when the dues, which had been $1.00 for the previous 20 years, were raised to $2.00.

In keeping with the still comparative informality of the scientific sessions of the Society, the annual banquets, begun in 1937 and continued through the War years, were equally informal and provided helpful relaxation from the tensions of the day. Thanks to a special entree that Oscar Hunter had at the Mayflower Hotel, we were able to wine and dine and relax very well for a modest sum. The per capita cost, including a preliminary social hour, began at $2.50 in 1941, with 51 present at the festivities. There was a gradual escalation in the cost to $4.00 in 1946. There is a record that, following one of these annual banquets, action was taken by the Society to reimburse Drs. Hunter and Choisser for 2 bottles of liquor that they had purchased to replenish the evening's exhausted supply. The highlights of these gatherings were Walter Freeman's limericks, the spirited accordion renditions of Carl H. Wells, and the mellifluous performances by the Pathological Quartet, with Choisser, lead; DeCoursey, first tenor; Ash, baritone; and Freeman, a very effective basso.

Contemporary—1947 to the Present

The Society entered its Contemporary Phase amid a number of changing circumstances. The War was over. There was notable expansion in the National Institutes of Health and in the hospitals of the Army, Navy and Veterans Administration. The Armed Forces Institute of Pathology was in process of evolving from the old Army Medical Museum to its successor, the Army Institute of Pathology.

There was also a more immediate and personal catalyst, Dr. Harold L. Stewart. Dr. Stewart had been away from Washington during much of the War period, serving as an Army pathologist, particularly as Chief of the Laboratory at Letterman General Hospital in San Francisco. In 1946 he returned to the National Cancer Institute as Chief, Laboratory of Pathology at the Clincal Center, a position he still holds with distinction. In 1947 he became the Secretary-Treasurer of the Society. Under Dr. Stewart's dynamic guidance the Society took on new regularity and scientific mood.

The year 1949 reflects the enlargement of this new phase. A symposium on arteriosclerosis was the feature of the annual meeting in May of 1949 in the D. C. Medical Society building. At the banquet that evening the guest speaker was Roger D. Baker, Professor of Pathology at the Louisiana State University Medical School at the present time; his topic was "Newer Aspects of the Pathogenesis of Vascular Sclerotic Disease." Later in the year, in December, the Society honored Dr. Rupert A. Willis of London at a joint meeting with the Laboratory Section of the D. C. Medical Society in the Medical Society building. Dr. Willis is an internationally known oncologist, now Professor of Pathology at the University of Leeds Medical School. On this occasion he spoke on "Diagnostic Errors Caused by Metastatic Tumors." The post-War inflation was evident in the $5.50 cost of the banquet given in Dr. Willis' honor at the Mayflower Hotel.

In 1950 (May 9-10) the Society joined in a meeting with the College of American Pathologists, the Baltimore Society of Pathologists, and the Section on Laboratory Medicine of the D. C. Medical Society. On this occasion the Society made its first awards to residents in pathology in the hospitals in the Washington area, awards based on case reports presented by the residents at Society meetings during the year. Also on the agenda was a tour of the new A.F.I.P. building at Walter Reed Army Medical Center. The membership of the Society at this time had risen to 160; at the monthly meetings there was an average attendance of 60.

The Society suffered a very serious loss during this year in the death of Dr. Oscar B. Hunter, Sr. He was a Counsellor of the Society at the time.

The annals of 1950 contain also a particular personal note and offer an appropriate place for special comment on the faithful and efficient thread of service woven into the history of the Society by 2 gracious ladies. In October of that year the Society presented a suitably artistic scroll to Mrs. Vi Marrinan in appreciation of her 10 years of service to it. She had been its first Recording Secretary, continuing as such until 1947. She had been secretary to the Director of the Army Institute of Pathology since shortly after World War II. Mrs. Marrinan was succeeded by Mrs. Catherine V. Porter, Dr. Harold Stewart's secretary at the Clinical Center at the National Institutes of Health. To Mrs. Porter goes the credit for introducing "proper methods" in the conduct of the Society's business. Minutes were kept, dues collected, and financial records maintained in an organized fashion, which has continued ever since. Mrs. Porter retired in 1963 and was succeeded by Mrs. Overmyer of the secretarial staff of the A.F.I.P.

During this Contemporary Phase of the Society there came a shift in meeting place, adding suitably to the newer mood of organizational formality, while, in a sense, it brought the Society "back home" once more. Never divorced from the Army, the Society met, from 1951 to 1955, in the Army Research and Graduate School at the WRAMC. On March 3, 1955, it assembled for its first meeting in the Dart Auditorium of the new building of the A.F.I.P. on the grounds of Walter Reed Army Medical Center. Here it was welcomed by William M. Silliphant, Captain, U. S. Navy, then Director of the A.F.I.P. He reviewed briefly the early days of the Society and mentioned some of the founding members: Callender, Ash, Hunter, Cajigas, Rice and Leffler.

The Society now adopted a unique solution to the growing conflict of its meetings with those of other societies; it began holding its meetings on a different weekday each month. In all other ways, however, the meetings retained their usual pattern from this time on. The hour-long program begins with a presentation of a case or two, then continues with one or more longer essays on scientific subjects. Adjournment is followed by a short social period, with light refreshments financed by the Society dues. The dues, incidentally, have remained at $2.00 a year in spite of this largesse. Financially, the Society has always kept to a very modest budget.

Moving now toward the later fringes of the past, we abandon the strictly chronological path to set down by categories some recent aspects of the Society which should be remembered.

There have been 2 more Constitutions and By-laws, bringing the total up to 4 so far. This is significant since it reflects the shifting organizational needs as the Society continues to grow and to meet modern challenges. There was 1 new Constitution in April of 1952 to provide adjusted classes of membership: Active, Associate, Honorary and Nonresident. The President at that time was Commander John L. Tullis, then pathologist at the Naval Medical Center. Another Constitution, of March 14, 1951, reduced the classes of membership again and defined them in detail, as follows:

> A. Active members shall be graduates of recognized schools of medicine, dentistry or veterinary medicine who are well trained in pathology. They must be licensed to practice their profession in the District of Columbia or their respective states, members of the military and civil services of the United States excepted.
>
> B. Associate members shall be other physicians, dentists, veterinarians and scientists in allied fields who are interested in the purposes of the Society.

The President at that time was William Newman, pathologist at George Washington Hospital and Medical School; Vice President was Frank B. Johnson of the A.F.I.P. staff; and Secretary-Treasurer was Daniel L. Weiss, D. C. General Hospital.

The category of Honorary members was in this way eliminated, and those who had received this election now entered into a special historic distinction. The Honorary category had first been set up in 1937 by the "second" First Constitution and By-laws, but it was some 12 years before any such members were designated. Those honored in that first selection in 1949–50 were:

C. Winternitz, then Chairman of the Medical Division of the National Research Council; General George R. Callender, a founding father of the Society; Otis Wildman, Captain, U. S. Navy, retired, former pathologist at the Naval Hospital; Howard T. Karsner, then Scientific Adviser to the Surgeon General of the Navy.

In 1955 Roger Choisser was added to this list; and in 1960 Ralph D. Lillie became the last to be so honored. Dr. Lillie, it will be recalled, was one of the founding members of the Society and its President in 1931. He joined the Public Health Service in 1925, where he was associated with Goldberg in the study of pellagra. He also did definitive work in tularemia, lymphocytic choriomeningitis, psittacosis, and Rocky Mountain spotted fever. In 1928 he began his career in histologic techniques. He was a member of the Biologic Stain Commission, he started the *Journal of Stain Technology*, and he has written a text on histochemistry. It was a loss to the Society when he left Washington; he is now associated with Tulane University in New Orleans.

The Society lost another valuable, and indeed picturesque, member in 1954 when Walter Freeman resigned and moved to the West Coast. He was a very active and inspiring member in the earlier days of the Society, before he became so active in clinical psychiatry, especially with his spectacular contributions to frontal lobotomy as a therapeutic measure.

Among the past Presidents of the Society who have since left Washington are:

Daniel Weiss, formerly Chief of Pathology at D. C. General Hospital, now Professor of Pathology at the University of Kentucky
John S. Howe, formerly at Mount Alto Veterans Administration Hospital, now at the Veterans Administration Hospital in Baltimore, Maryland
Hans Smetana, formerly a Section Chief at the A.F.I.P., now at Delta Primate Regional Research Center, Tulane University, New Orleans, Louisiana.

Some of the past Presidents who will be recognized as still among us are:

Kenneth L. McCoy, Providence Hospital
Vernon E. Martens and Theodore Winship, Washington Hospital Center
Thelma B. Dunn, National Institutes of Health (Dr. Dunn, incidentally, was elected "Woman of the Year" in 1958 by the National Women's Medical Association and in 1962 received the Federal Women's Award.)
O. Benwood Hunter, Jr., Oscar B. Hunter Memorial Laboratories, Washington, D. C.
H. H. Leffler
Chapman H. Binford, originally with the Public Health Service, later a Section Chief at A.F.I.P., now Medical Director of the Leonard Wood Memorial (American Leprosy Foundation)
Louis B. Thomas, Dr. Stewart's Associate in Pathology at the National Cancer Institute
General Joe M. Blumberg, present Director, A.F.I.P.
Colonel Colin Vorder Bruegge, Chief of Research and Development, Office of the Surgeon General, U. S. Army
Colonel Carl F. Tessmer, Office of the Surgeon General, U. S. Army, now at the Anderson Hospital and Tumor Institute, Houston, Texas.

The Society has continued to present annual meetings of significance locally, usually joint meetings with other nearby societies of pathologists or with representatives of the national societies. These have included slide seminars, which have become a particularly popular feature among pathologists throughout the country. Some of the more recent of these sessions are:

1955, May. "Diseases of the Thyroid Gland." Gustavus H. Klinck, Jr., of the Armed Forces Institute of Pathology, for which 103 slide sets were mailed to subscribers. The occasion was a joint meeting of the Washington Society of Pathologists, the Pathology Section of the Baltimore City Medical Society, and the Middle Eastern Regional Section of the College of American Pathologists, held at the Clinical Center of the National Institutes of Health. At a social hour and dinner at the Officers' Club at the Naval Medical Center the guest speaker was George W. Corner, M.D., Director of the Department of Embryology, Carnegie Institute of Washington, D. C.

1957, February. "Symposium on Pulmonary Histoplasmosis," at a joint meeting with the Potomac Chapter of the American College of Chest Surgeons, with 125 members and guests attending.

1957, May. "Unusual Lesions of the Gastrointestinal Tract." Robert Horn, Henry Ford Hospital, Detroit, principal essayist; Charles E. Berkland, Jr., of the old Garfield Hospital, led the radiologic discussion. This was a joint meeting with the Pathology Section of the Baltimore City Medical Society and the Middle Eastern Regional Section of the College of American Pathologists, held at the Clinical Center of the National Institutes of Health. At a dinner that evening at the Officers' Club, Walter Reed Army Medical Center, the guest speaker was Admiral Preston F. Mercer, retired, who spoke on "Building an Investment Program."

1961, May. "OB-GYN Pathology." William D. Ober, formerly at the Army Institute of Pathology and now pathologist at the Knickerbocker Hospital, New York, for which 101 sets of slides were distributed. The meeting was also held at the Clinical Center of the National Institutes of Health.

1962, May. "Pediatric Pathology," moderated by Dr. Lotte Strauss. This was a joint meeting with the Baltimore Society of Pathologists at the Veterans Administration Hospital in Baltimore, Maryland.

1963, May. "Lesions of the Breast and Ovary," moderated by Hugh Grady, formerly on the staff of the A.F.I.P., now Professor of Pathology at Seton Hall College of Medicine, Jersey City, New Jersey. This was a joint meeting with the Baltimore Society of Pathologists.

1964, May. "Arthritis and Rheumatoid Conditions," led by Dr. Leon Sokoloff of the National Institutes of Health, for which 325 sets of 12 to 15 slides were distributed.

1965, May. "Diagnostic Problems in Neuropathology," moderated by Kenneth M. Earle, Chief, Neuropathology Section of A.F.I.P. This was a joint meeting with the Southeastern Branch of the College of American Pathologists and Pathology Section, Baltimore Medical Society.

Conclusion

We emerge now from these latter-day fringes of the immediate past to take a fuller look at the Society as a whole, to glance swiftly over its colorful history, and to assess its rather unique position in the present scene.

Born spontaneously out of professional loneliness, growing up with an adolescent carefree verve in the midst of wartime professional challenges, the Society then assumed the soberer discipline of professional maturity and continues vigorous and resilient to the needs of change.

In a way that is peculiarly distinctive and built into its formation this Society is a microcosm of the 4 tracks on which pathology travels not only in the Washington Metropolitan Area but nationally, and it shares their special scientific direction. Thus it brings together the groups, otherwise somewhat clannish, of the academic, the practicing, the Government, and the research pathologists under congenial circumstances for the exchange of ideas. Here the younger men can find stimulation in every type of pursuit. The Society is open to all, with the only qualifications demanding training, experience, and a genuine interest in the specialty.

It is hoped that our clinical colleagues in this area may recognize the importance in their midst of this Society which grew from such a humble beginning and that they may drop this sketch with a better understanding of the pathologist's continual labors to develop individual capacity and high ideals that will lead toward his full contribution to the common weal.

This account has been written in the midst of heart-warming recollections of a great troop of devoted and sincere American doctors. With fondness and respect I have listed names which will be known to many among our nonpathologist colleagues in Washington medicine, and who, as indicated by their present status, are spreading far and wide the Society's ideals and exerting significant influence in the top echelons of medical science. In a very special way these men conceived and nurtured from their professional enthusiasm this Washington Society of Pathologists.

Health Dept. Notes

New Service for Military Rejectees

PRIVATE PHYSICIANS who work with Selective Service Boards or who have had other experience with military medicine are aware of the high standards of health required by the armed forces.

These high standards have resulted in the rejection of a large percentage of selectees (draftees) at the time they are examined at the pre-induction centers. In the case of the District of Columbia the rejection rate for medical or physical reasons in 1964 was more than 20 per cent.

Selectees from the District receive pre-induction physical examinations, intelligence and other testing on specified days each month at Fort Holabird in Baltimore. The number seen will vary as the District's draft quota varies. During 1964 it was about 125 men per day for the District's 4 examining days, or 500 men in all each month. If more men are to be examined, more days may be added.

Health and physical examinations given at the Armed Forces Examining Station in Baltimore are the profile, screening type rather than comprehensive examinations. The AFES staff is unable to provide health counseling or referral to those men rejected for military service.

It has been the experience of those working in this area that military rejectees often do not understand or are otherwise confused as to the specific medical reasons for which they have been rejected. Also, they are seldom aware that their health deficiencies can be corrected or relieved if they will accept professional care and rehabilitation.

A new program of the D. C. Department of Public Health will attempt to get these rejectees to such needed medical care by a private physician or in a public clinic, if they are eligible.

Working with officials at the Fort Holabird AFES, the program staff will interview selectees rejected for military service, discuss with them the reasons for their rejection, and seek to interest them in obtaining medical assistance.

The staff will encourage rejectees to arrange for correction of remedial defects which are detected at the AFES. They will also suggest more complete health rehabilitation through the person's physician or clinic when there are other generalized or specific conditions of poor health.

Each rejectee's case will be followed after referral to determine whether he received the services he required and whether future rehabilitation is indicated.

The project will operate out of our facilities at 815 Ninth Street, N.W. The staff will make frequent visits to the AFES location in Baltimore, as selectees from the District are being examined, to begin work with each rejectee.

The project interviewers will not offer medical counseling or advice which should come from a physician. They will instead encourage each rejectee to seek such counsel, medical care and rehabilitation as may be needed.

With the coöperation of the medical profession in Washington, it may be possible to do much to improve the health of these individuals. Such coöperation is welcomed by the Department of Public Health.

Murray Grant, M.D., D.P.H.
D. C. Director of Public Health

Medicolegal Abstracts

Patient-Physician Privilege: A Federal trial court in Ohio has recently considered the extent to which a physician's insurer can intrude into the doctor-patient relationship. The patient in this case alleged that the physician's insurance carrier had persuaded the doctor to divulge to it confidential information regarding the patient. Furthermore, it had even persuaded him to terminate his professional relationship with that patient.

The court held that although there is no privilege under common law which makes communications between patient and physician confidential, there still can be common-law action for the breach of such confidence. Modern public policy demands that physicians obey the implied promise of secrecy in the profession's Code of Ethics. This is also expressed in the state's privileged communications statute and the provision of the state medical licensing statute which makes willful betrayal of a professional secret a ground for revocation.

The court stated further that an insurer can only legitimately persuade a physician to discontinue treating a patient if the patient is going to sue the physician and if that suit concerns his conduct in the course of treatment. There had been no expression of such intent in this case.

Comment: This court evidently feels that ethical practice is not only desirable but mandatory and legally enforceable. Note, however, that the case has not yet been tried under this court's application of that principle.

This opinion also cautions us to examine carefully an insurer's advice that a physician discharge a patient from his care.

* * *

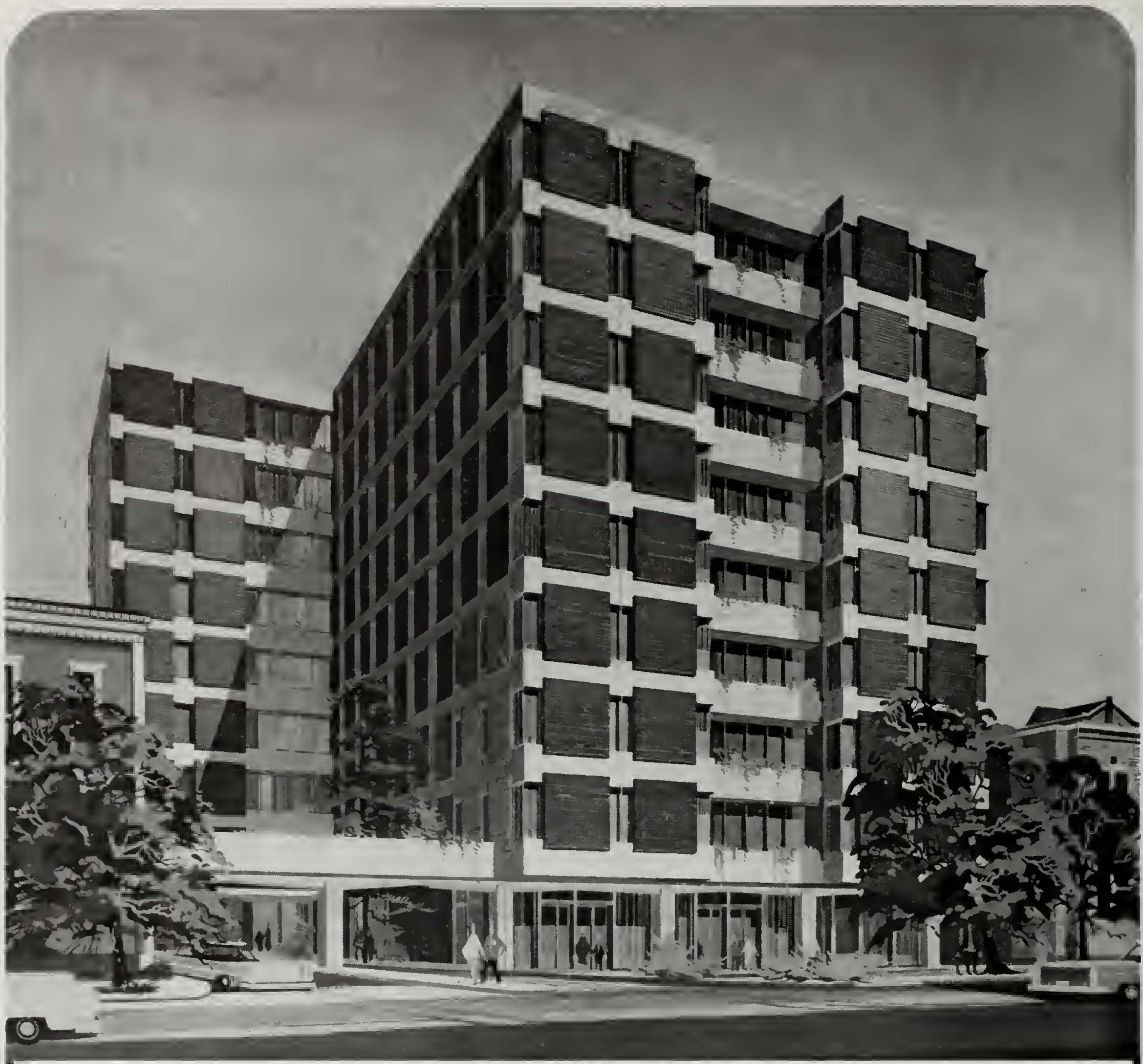
Hospital Staff Privileges: A physician in Kansas sued a private hospital because it rejected his application for admission to its medical staff. He felt that the board of directors should have passed upon his application itself without allowing the medical staff to review it. He felt that such review placed the responsibility for the appointment upon the medical staff, whereas state law specifically places this power in the board of trustees or directors.

A trial court ordered the hospital to admit him to its medical staff. The Kansas Supreme Court, however, reversed that decision. It pointed out that the board of directors did indeed make the final decision upon the application. The fact that it asked the medical staff's credentials committee for its opinion did not alter the effectiveness of the board's final decision.

Comment: This decision clearly delineates the relationship between the various hospital officials in considering staff appointments.

* * *

"Mentally Ill": The question of meaning of "mentally ill" was investigated by the Nevada Supreme Court. An 18-year-old patient sought release from a state mental hospital. Two psychiatrists testified that the patient was not psychotic but was a sociopath. They disagreed as to whether



UNIVERSITY

MEDICAL BUILDING

2143 K STREET, N.W.
OCCUPANCY FALL 1966

ADJACENT TO GEORGE WASHINGTON UNIVERSITY HOSPITAL
SEVERAL CHOICE SUITES AVAILABLE IN WASHINGTON'S NEWEST MEDICAL BUILDING
CUSTOM DESIGNED FOR YOUR REQUIREMENTS

SHANNON · & · LUCHS
Realtors Since 1906

900 SEVENTEENTH STREET, N.W.

CALL MR. MORRISON
296-2345

he could be considered "mentally ill" as that term is used in the statute.

The patient had the I.Q. of a high-grade moron, and all who examined him agreed that he was a sociopath almost devoid of moral sense and possessing homicidal tendencies. He had been completely unresponsive to penal or rehabilitative measures and showed no promise of ever responding to treatment. The State Supreme Court felt that these factors justified the conclusion that he was mentally ill as that term is used in the statute. It did not feel that it must be guided by the classification of psychotic reactions by the American Psychiatric Association. If it had been so limited, it would have been forced to conclude that this patient should be released.

Comment: Perhaps judicial wisdom will be helpful in some measure in the search for definitions and criteria in this gray area between "bad" and "sick."

* * *

Warning the Patient: A New York intermediate appellate court upheld a judgment against a physician in a case of exfoliative dermatitis following gold therapy. The patient contended that the physician had not warned her of the possibility of this complication.

Comment: We are warned again of the obligation to inform our patients about the potential side-effects of dangerous medications.

* * *

Witness Fees: If an attending physician testifies as an expert at a trial involving his patient, he is entitled to a fee as an expert witness. A Louisiana intermediate appellate court ruled thus in a case where physicians testified as experts during a trial in which their patient sought damages for injuries sustained in an automobile accident.

* * *

House Staff Prescriptions: Unlicensed interns and residents are not authorized to write prescriptions in Florida according to the ruling of the State Attorney General. He pointed out in this opinion that when an unlicensed person writes a prescription, he is then practicing medicine illegally, and this is a felony in the state of Florida.

When interns and residents write orders which require prescriptions, the Attorney General indicated that these prescriptions should be countersigned by a licensed resident physician. They would then become the prescriptions of a licensed practitioner.

Comment: Though this ruling may at times be inconvenient, it should work to the benefit of the profession as a whole.

BEUCHLER'S
915-19th Street, N.W. Republic 7-6006

* * *

Round Robin: A Florida physician was thwarted in his circuitous efforts to collect a fee from his patient.

Early in 1964 he treated his patient for injuries received in an automobile accident. The patient did not pay him but agreed to give him a portion of any recovery he might get in a personal injury suit against the other driver and his insurance company.

In May 1964 the patient himself was sued in a totally different action by another person. That other person was successful and a judgment was obtained against the patient.

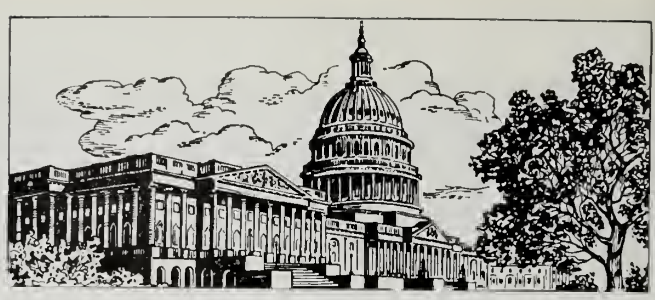
In June 1964 the patient was successful in his suit against the other driver and obtained a judgment against that driver's insurance company.

The person who won his suit against the patient then promptly filed a garnishment proceeding against the other driver's insurance company. Meanwhile the physician also filed a claim against that insurance company based on the purported assignment he had received from the patient.

The court sorted out the various claims and ruled that the physician's claim was at the bottom of the pile.

Comment: It may be fortunate that the court was never required to determine the validity of the purported assignment.

Robert R. Montgomery, M.D.



NEWS & PERSONALS

Summary of Executive Board Actions

The Executive Board of the Medical Society of the District of Columbia met for dinner at 6.30 p.m. in the Library of the Medical Society's building, December 6, 1965. Dr. Duane C. Richtmeyer, Chairman, called the meeting to order at 7:00 p.m. Present were Drs. C. Willard Camalier, Jr., Darrell C. Crain, J. Spencer Dryden, Raymond T. Holden, Kenneth L. McCoy, Edward W. Nicklas, Paul R. Wilner, and Mr. George W. Cooley, Secretary. Guests were Dr. Warren D. Brill, Chairman, and Dr. Murdock Head, member, of the Committee on Public Information and Education, and Mr. Walz, associate of Dr. Head.

Committee Meetings: The Secretary reported that the following committee meetings had been held since the last Board meeting:

November 4	Liaison Committee with Public Health Department
5	Subcommittee on Cancer Control
5	Fee Review Committee
9	Committee on Emergency Medical Service
9	Scientific Assembly meeting re Panel Program
9	Committee on Alcoholism
11	Liaison Committee with Public Health Department
16	Grievance Committee
17	Subcommittee on Insurance
17	Board of Credentials
18	Traffic Committee
December 3	Fee Review Committee

Board of Credentials: The Board approved, on recommendation of the Board of Credentials, the following applicants for membership and changes in membership status:

Active Members

Charmian Elkes, 5225 Connecticut Avenue, N.W.
William B. McAvoy, George Washington University Hospital
Carl A. Meyer, Jr., 1150 Varnum Street, N.E.
Arnold C. Ratner, 1635 Massachusetts Avenue, N.W.

Associate Members

Jae Hyung Choi, 708 Massachusetts Avenue, N.W.
Richard H. Kastner, 6411 Landover Road, Cheverly, Md.

Resident-Intern Members

John E. Kehoe, Walter Reed General Hospital
Larry B. Silver, Children's Hospital

Transfers

Active to Associate: Richard L. Cohen, Donald A. Kellogg, Alfred F. Suarez, and Frederick H. Wilhelm
Associate to Active: Leslie H. Fenton and Irvin H. Peiser, Jr.
Resident-Intern to Active: Herbert A. Urweider

Reinstated to Active membership was Albert S. Winer, and to Associate membership were Edward H. Bowen, Jr. and Clifton K. Himmelsbach.

Committee on Public Information and Education: It was voted to permit the use of the Medical Society's name on the film, *The Wasted Ones*, produced by Dr. Head through the Airlie House Foundation and to be shown on "prime time" throughout the country. It was agreed that future films, as with this, should be reviewed by the Executive Board or a special committee selected by the Board.

AMA House of Delegates: Drs. Holden and Camalier reported informally on the meeting of the AMA House of Delegates in Philadelphia and agreed to prepare a brief statement for publication in the MEDICAL ANNALS (see page 88).

Annual Scientific Assembly: Dr. Wilner reported on the SCIENTIFIC ASSEMBLY, stating that there were approximately 2,000 registrants, of whom over 1,200 were physicians. Rather than a 1966 ASSEMBLY it was agreed that Dr. Coffey should contact Dr. George P. Blundell to determine how the Society might assist the Southern Medical Association in its meeting and that the

Society would not have a separate ASSEMBLY during 1966.

New Headquarters Building: The Secretary reported on the financial situation, especially regarding the gifts received from physicians for furnishing the new building. He stated that the Society's offices expected to be moved to the new headquarters late in December and the MEDICAL Bureau earlier, the week of December 13. The Secretary also reported on a letter from Dr. Everett J. Gordon in reference to the sale of the Eye Street property to the Society. This was referred to the House and Building Fund Committee for suggestions on how this matter might best be handled.

Miscellaneous Business

A resolution concerned with direct billing by pathologists and radiologists was approved.

It was agreed that the Society's representatives to attend an AMA Conference to consider Title XIX of P.L. 89-97 should be Dr. Crain and Dr. Jack Kleh.

Dr. Nicklas reported on a conference with a special District committee to consider the matter of parking privileges. It was agreed to approve his recommendations for forwarding to the District Commissioners.

The Secretary reported on a VD Seminar to be held, March 2–3, in the Medical Society's building. On the planning committee are Drs. John A. Kenney, Jr., Paul B. Cornely, and James A. Curtin.

It was voted not to accept institutional advertising in the MEDICAL ANNALS from the wine industry.

A committee composed of Drs. Holden, Nicklas, Camalier and Wilner was appointed to confer with a representative of the State Department concerning full-time employment of a surgeon to be attached to that Department.

An introductory statement to accompany the proposed revision to the Relative Value Schedule was approved and the Secretary was authorized to mail this material to the membership.

The Secretary reported that a meeting had been arranged with Commissioner Duncan to discuss various health problems and the relationship of the Society to the Commissioners.

There being no further business, the meeting was adjourned.

Proceedings of December 20 Meeting

The Executive Board held its second meeting in December at the home of Dr. Duane C. Richtmeyer, Chairman of the Board. Present were Drs. C. Willard Camalier, Jr., Robert J. Coffey, Karl C. Corley, Darrell C. Crain, J. Spencer Dryden, Edward W. Nicklas and Paul R. Wilner. Also present was Miss Charlene Stivala, Recording Secretary. After dinner, the meeting was called to order by the Chairman at 8:00 p.m.

Committee Meetings: The following meetings were reported to have been held since the last meeting of the Board:

December 8	Board of Credentials
10	Committee on Hospital Relations and Medical Schools
13	Utilization Committee
14	Grievance Committee
14	Committee on Alcoholism
16	Traffic Committee

Board of Credentials: The Executive Board approved for membership the following applicants and change in membership status recommended by the Board of Credentials:

Active Members

Gordon B. Avery, Children's Hospital
Warren P. Dearing, 1321 14th Street, N.W.
Thomas P. Dwyer, 2121 Pennsylvania Avenue, N.W.
Mervin Jeffries, 3800 Reservoir Road, N.W.
John F. O'Neill, 1605 22nd Street, N.W.
Paul G. Rhodes, Georgetown University Hospital
Raymond W. Turner, 2121 Pennsylvania Avenue, N.W.

Associate Members

Socorro Abela-Palmon, Georgetown University Hospital
Bartolo M. Barone, 13th and Hudson Streets, Arlington, Va.
Robert L. Flynn, U. S. Public Health Service
Chalon Rodriguez, 3801 North Fairfax Drive, Arlington, Va.
Javier Sagarminaga, Georgetown University Hospital

Transfer

Active to Special: Arthur E. Cliff

Having fulfilled the requirements of the Constitution and By-laws, the following members were confirmed as Life members:

William M. Ballinger
G. J. P. Barger
Hartford R. Burwell
Hugo Einstein
Don Johnson
Hyman D. Shapiro
Elmer R. Shepherd
Wallace M. Yater

Report of Delegates to the AMA: Dr. Camalier submitted a written report on the meetings of the AMA House of Delegates during the Clinical Session in Philadelphia, November 28 to December 1. He called specific attention to: (1) the contemplated increase in membership dues; (2) the "prevailing fee" as opposed to the "usual and customary fee" concept, stating that the House reaffirmed its support of the "usual and customary fee" and urged its continuance.

Not mentioned in the report was the fact that the Reference Committee has accepted the plan that 1 delegate be elected for every 1,250 members of each state association. Dr. Camalier assured the Board that he and Dr. Holden would devote strict attention to future meetings of the House so that any action would not adversely affect this Society.

Censured Physicians: The matter of publishing the names of censured physicians was again brought to the attention of the Board, since it was recently ruled to publish such names in the Society's *Newsletter*. There was considerable discussion, but it was generally agreed that the practice should be discontinued.

A motion was made and carried that this matter should be referred to the Committee on Constitution and By-laws for study as well as a possible change concerning Paragraph 3 under Article IV, Section I of the Constitution and By-laws with respect to the suspension of members without prejudice. It was further recommended that the Committee be instructed to confer with the Society's legal counsel before reaching a decision.

Area Dialysis Program: In a statement submitted by Dr. William P. Herbst, he suggested that in view of the recent publicity concerning the unavailability of dialysis facilities, the Society might undertake plans for the acquisition of a local regional dialysis facility. The Board voted to refer this matter to the Liaison Committee with Medical Schools and Hospitals for consideration and report.

Section on Radiology: The Section on Radiology submitted for the Board's approval a statement of policy endorsed by the American College of Radiology which would separate the billing of fees arising from hospital services. The Board approved this statement.

Meeting of the Southern Medical Association: The Chairman read a memorandum from Mr. Fred Trust in which he related the proceedings of a meeting held with representatives of the Southern Medical Association to discuss preliminary plans and the Medical Society's role in the Association's Convention to be held in Washington, D.C. in November 1966. The Board voted to refer this matter to a special liaison committee to be appointed in the near future for the purpose of coöperating with the SMA and that the recommendations of this committee be referred back to the Executive Board for final approval.

Dedication of the New Headquarters: Dr. Richtmeyer reported that Dr. Arthur A. Morris had suggested that if the Society is planning to have a guest speaker for the opening of the new headquarters, Doctors Hospital would be glad to pay the honorarium.

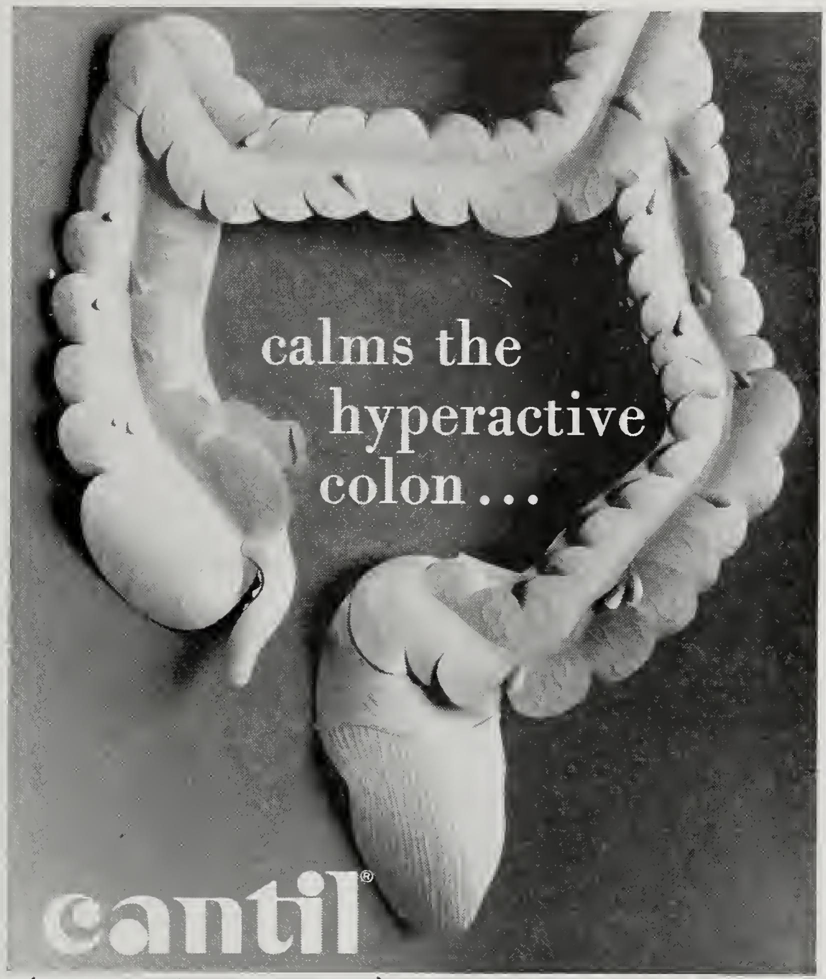
The date for the dedication of the new headquarters was discussed. Since Dr. James Z. Appel, President of the AMA, had been approached to be the Society's guest speaker for this ceremony, it was suggested that a date be set in the near future in order for him to arrange his travel schedule accordingly. A motion was made and carried that the Chairman of the House and Building Fund Committee be asked to report to the Executive Director by January 15 the progress in plans and the date for the dedication ceremony and that the Executive Director so inform the Executive Board.

DOCPAC: Dr. Richtmeyer read a letter prepared by Dr. William H. Cooper, Chairman of the District of Columbia Political Action Committee, for circulation to the membership. Members of the Board reiterated the position of the Executive Board concerning this organization, namely, that the Board approves in principle the philosophy of DOCPAC and would urge that as a matter of good citizenship each physician should participate in the political activities of his community. The Board further agreed that if a physician considers DOCPAC a worthwhile project, he ought to take an active part in this nonpartisan group. The Board stated unequivocally, however, that DOCPAC never was and never will be under the control of or by the Medical Society of the District of Columbia.

After discussion it was agreed that Dr. Cooper should prepare another letter to be submitted to the Board which would point out that physicians should take an active part in political affairs and should be conversant with this new group. The letter should explain the purpose of DOCPAC and list the officers for the information of the members of the Society.

President Wilner reported briefly on his recent meetings with Commissioner Duncan and with Dr. Murray Grant and Dr. Kerr of the D. C. Health Department.

In appreciation of his service during the past year, Dr. Richtmeyer was presented with a sterling silver tray on behalf of the Executive Board.



(mepenzolate bromide)

helps restore normal motility and tone

Cantil (mepenzolate bromide) works in the colon. In irritable colon, spastic colon, ulcerative colitis and other functional and organic colonic disorders, it acts to:

- control diarrhea/constipation
- relieve spasm, cramping, bloating
- make patients more comfortable

with little effect on stomach, bladder or other viscera.

"In 40 of 44 cases of irritable or spastic colon, Cantil [mepenzolate bromide] or Cantil with Phenobarbital reduced or abolished abdominal pain, diarrhea and distention and promoted restoration of normal bowel function . . . Cantil [mepenzolate bromide] proved to be singularly free of anticholinergic side-effects. Blurring of vision or dryness of the mouth were occasionally seen and were usually managed with a reduction in dosage. Urinary retention, noted in two cases was eliminated in one by reducing dosage."[1]

IN BRIEF:

One or two tablets three times a day and one or two at bedtime usually provide prompt relief. Cantil with Phenobarbital may be prescribed if sedation is required.

Dryness of the mouth or blurring of vision may occur but it is usually mild and transitory. Urinary retention is rare. Caution should be observed in prostatic hypertrophy—withhold in glaucoma. Cantil with Phenobarbital is contraindicated in patients sensitive to phenobarbital.

Supplied: CANTIL (mepenzolate bromide)—25 mg. per scored tablet. Bottles of 100 and 250.

CANTIL with PHENOBARBITAL—containing in each scored tablet 16 mg. phenobarbital (warning: may be habit forming) and 25 mg. mepenzolate bromide. Bottles of 100 and 250.

1-Riese, J.A.: Amer. J. Gastroent. 28:541 (Nov.) 1957

LAKESIDE LABORATORIES, INC.
Milwaukee, Wisconsin 53201

Meetings

Two full days will be devoted to a **Venereal Disease Seminar**, March 2 and 3, 1966, to be held in the Medical Society's new auditorium at 2007 Eye Street, N.W. The Seminar is being presented by the District of Columbia Department of Public Health and is co-sponsored by the Medical Society of D.C. and the Medico-Chirurgical Society of D. C.

The morning session will be devoted to lectures and discussions on the diagnosis, treatment, interpretation of laboratory tests, and other problems of venereal disease management as encountered in the day-to-day practice of medicine. National authorities on venereal disease control will discuss the following topics:

1. Treatment and management of treatment reactions.
2. New developments in the management of syphilis and gonorrhea.
3. Venereal disease and the homosexual.
4. Clinical and laboratory diagnosis of venereal diseases.
5. Diagnosis and management of gonorrhea.
6. Laboratory tests in venereal diseases—their interpretation.

The afternoon sessions will consist of discussion groups or workshops. Each workshop will be headed by a panel of experts who will urge the participating physicians to ask questions, present problems, and discuss some of their own experiences.

This Seminar is free to all physicians. The American Academy of General Practice will allow up to 12 hours' credit for attendance and participation.

Physicians are invited to attend the **Aaron Brown Lecture**, to be held in the Gorman Auditorium at the Georgetown Medical Center, March 1, at 5 p.m. The speaker, Dr. Irving M. London, Chief of the Department of Medicine, Albert Einstein College of Medicine, New York, will present a paper on "The Synthesis of Hemoglobin and Its Relation to Hypochromic Anemias in Man." The lecture is sponsored by the Georgetown Chapter of Phi Delta Epsilon.

Children's Hospital has scheduled a **Postgraduate Course in Pediatric Neurology**, March 23–25, to be held in coöperation with the George Washington and Georgetown University Schools of Medicine. All sessions will convene at the International Inn at Thomas Circle, 14th and M Streets, N.W. Because of a Public Health Service grant, there is a minimal registration fee of only $10.

There will be several visiting speakers, including Dr. Macdonald Critchley, of London, who will give the Copeland Memorial Lecture, March 25, at 2:15 p.m. The subject of his address will be: "Is Developmental Dyslexia the Expression of Minimal Brain Defect?"

Advance registration should be made with Dr. Richmond S. Paine, Children's Hospital, Washington, D. C. 20009.

General News

The S. S. HOPE left Sunday, January 9, from Philadelphia for its newest mission, Nicaragua. Dr. William B. Walsh, of Washington, originator of Project HOPE, was on hand to officiate at the ceremonies prior to departure. On board was a permanent staff of 98 doctors, nurses and technicians, including 28 "veterans" who have served on previous missions of the HOPE to Southeast Asia, Peru, Ecuador, and most recently, Guinea, West Africa. The HOPE will be anchored for 10 months in Corinto on the west coast of Nicaragua, commencing on January 19 her first program in Central America.

Dr. Walsh was presented a check for $500 for Project HOPE in December by Dr. Woodson T. Birthright, Regent for the District area of the International College of Dentists, and Dr. Francis I. Fabrizio, who will be General Chairman of the American Dental Association Convention in Washington in 1967.

The Association of Military Surgeons of the United States announces the appointment of **Lt. Colonel Donald H. Glew, MC, USA (Ret.)** as Editor of its official journal, *Military Medicine*, effective January 1, 1966. A native Washingtonian, Dr. Glew is an alumnus in medicine of George Washington University and is presently a member of its faculty as Associate Professor of Surgery, a post he will retain. He is a diplomate of the American Board of Surgery and a Fellow of the American College of Surgeons.

Dactilase
LAKESIDE

more complete relief for the "dyspeptic"

DACTILASE®

Dactilase provides comprehensive therapy for a wide range of digestive disorders. Its antispasmodic and anesthetic actions rapidly relieve pain and spasm. Dactilase decreases hypermotility without inducing stasis. In addition, it supplies digestive enzymes to help reduce bloating, belching and flatulence. Dactilase does not interfere with normal digestive secretions. Very often it can be a most useful answer to the dyspeptic's needs.

DACTILASE: Each tablet contains: Dactil® (piperidolate hydrochloride), 50 mg.; Standardized cellulolytic* enzyme, 2 mg.; Standardized amylolytic enzyme, 15 mg.; Standardized proteolytic enzyme, 10 mg.; Pancreatin 3X** (source of lipolytic activity), 100 mg.; Taurocholic acid, 15 mg.

*Need in human nutrition not established. **As acid resistant granules equivalent in activity to 300 mg. Pancreatin N.F.

Side Effects and Contraindications: DACTILASE is almost entirely free of side effects. However, it should be withheld in glaucoma and in jaundice due to complete biliary obstruction.

Administration and Dosage: One tablet with, or immediately following each meal. Tablets should be swallowed whole.

Supplied: Bottles of 60 and 250.

LAKESIDE LABORATORIES, INC.
Milwaukee, Wisconsin 53201

The Aerospace Medical Association announces the establishment of the **William Randolph Lovelace Fellowship in Aerospace Medicine** to honor the memory of its thirteenth President, Dr. William Randolph Lovelace II, who died recently in an airplane accident.

Dr. Lovelace devoted his career to research, teaching, and practicing aerospace medicine. The Lovelace Foundation for Medical Education and Research was organized by him in 1947 and has become world-famous in operations related to manned space flight. He served as President of the Association in 1942 and 1943.

The American Psychiatric Association, at the fall meeting of its Assembly, redistricted itself so as to place the District Branch into a newly formed Middle Atlantic Area together with Pennsylvania, New Jersey, Maryland and Delaware, effective in May 1966. Previously, the District together with Maryland and Delaware were members of the 16-state Southern Area.

The Section on Plastic Surgery of the Medical Society of the District of Columbia elected new officers, November 16. They are:

Dr. John E. Alexander, *Chairman*; Dr. Nicholas M. Azzato, *Vice Chairman*; and Dr. Alfred J. Suraci, *Secretary-Treasurer.*

Dr. John J. Nolan took office, January 1, as **President of the Arlington County Medical Society**. Other officers serving for 1966 are:

Dr. Gerald J. Fisher, *President-elect*; Dr. Robert E. Byrne, *Vice President*; Dr. Robert H. Gruver, *Secretary*; and Dr. Arthur I. Sims, *Treasurer.*

Dr. Nolan and Dr. Byrne are Associate members of the D. C. Medical Society.

Dr. Michael Newton, Professor and Chairman of the Department of Obstetrics and Gynecology at the University of Mississippi School of Medicine, has been chosen by the Executive Board of the American College of Obstetricians and Gynecologists to succeed Dr. Robert A. Kimbrough as Director of the College when he retires on July 31.

The George Washington University School of Medicine dedicated the **Charles Stanley White, Jr. Memorial Conference Room** at the School (1339 H Street, N.W.), December 10, 1965. The memorial was created through an endowment fund established in 1962 by Dr. Charles Stanley White, Sr., a member of the George Washington faculty for 45 years, now Emeritus Professor of Surgery. His son died in 1964.

Dr. James Shannon, Director of the National Institutes of Health, has been named one of 10 recipients of the 1966 Awards for Distinguished Achievement in medicine given by *Modern Medicine* Magazine. Dr. Shannon received the award "in recognition of his direction of the National Institutes of Health to advance research by prudently utilizing vast sums of money without restricting scientific inquiry." Dr. Shannon was Associate Director of NIH from 1952 to 1955, at which time he became its Director.

Dr. Arthur J. Wilets, of Chevy Chase, Md. has been elected President of the Medical Staff of Holy Cross Hospital. He succeeds Dr. Marvin I. Mones. Dr. Wilets is an Active member of the Montgomery County (Md.) Medical Society, and Past President of the Medical Staff of the Washington Sanitarium and Hospital.

"The Artificial Kidney: What It Is and How It Works" is the first of a new series of informative publications on kidney disease, its prevention and treatment, which has just been issued by the Public Health Service. Single copies (PHS Publication No. 1409) are available without charge from the Division of Chronic Diseases, Public Health Service, Washington, D. C. 20201.

The American Cancer Society, District of Columbia Division, has moved its offices into the Medical Society's building at 2007 Eye Street, N.W. The new telephone number is 659–2760.

Personals

Dr. Clifton K. Himmelsbach was appointed Associate Dean for Research of Georgetown University School of Medicine on September 1, 1965. He came to Georgetown University from the National Institutes of Health where he was Associate Director of the Clinical Center. He is a graduate in medicine of the University of Virginia.

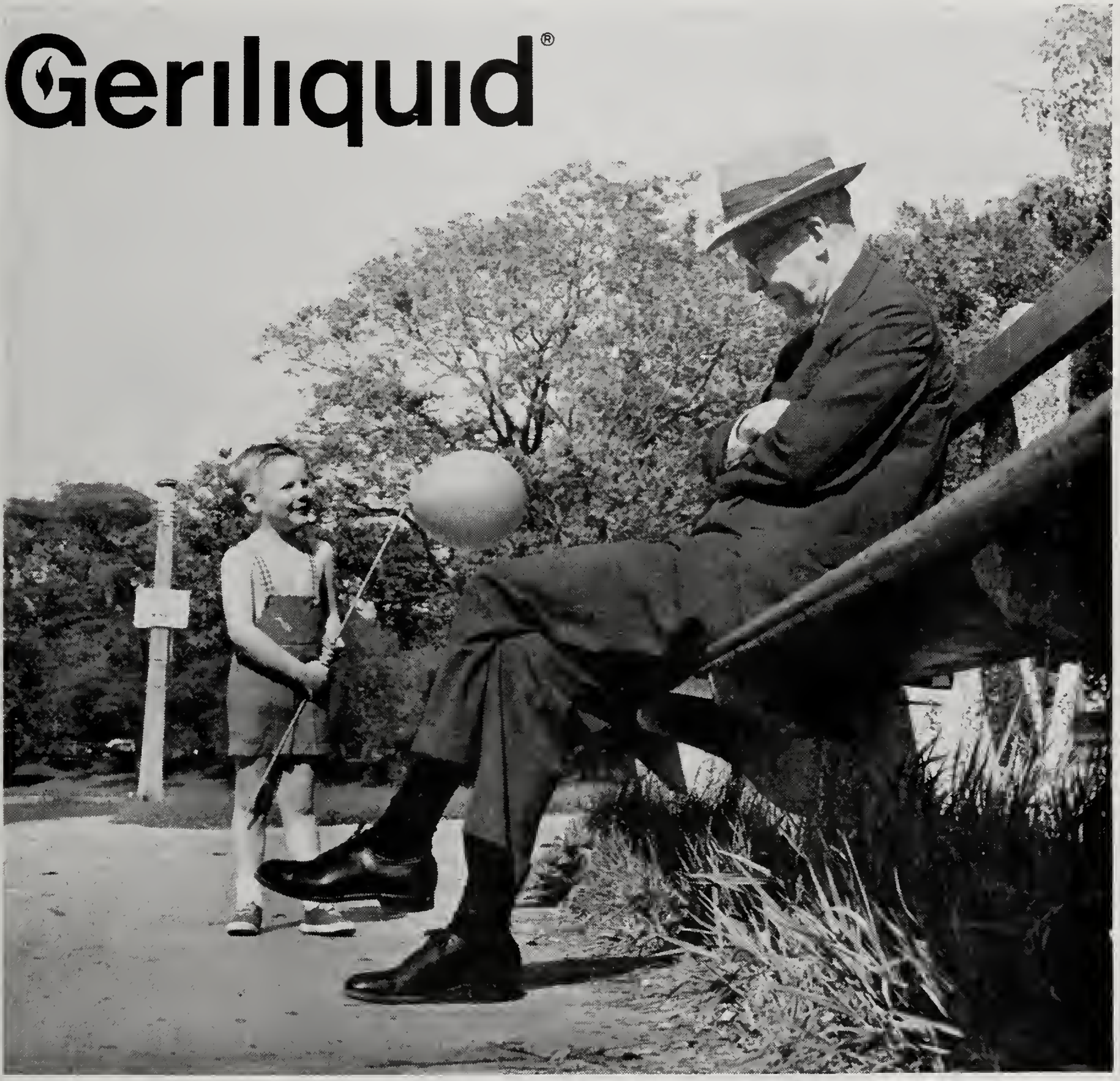
Dr. Jacob J. Weinstein has been appointed by the Board of Governors of the American

when even southern sun fails to warm cold hands and feet

provide rapid, sustained vasodilation for warmth and relief of pain, dizziness and faintness in patients with impaired peripheral circulation

GERILIQUID warms cold hands and feet through the thermogenic action of glycine and through sustained vasodilation by glycine and niacin. In addition, in patients with impaired peripheral circulation, GERILIQUID increases the ability to walk farther with less pain. Patients particularly like the palatable, sherry wine base.

Geriliquid®



IN BRIEF: Composition: Each 5 ml. contains: niacin 75 mg. and aminoacetic acid (glycine) 750 mg. in a palatable sherry wine base; alcohol 5%.

Side Effects: Occasional lightheadedness or transient itching which may disappear with continued use. There are no known contraindications; however, caution is advised when there is concomitant administration of a coronary vasodilator.

Administration and Dosage: One or two teaspoonfuls 3 times a day before meals. If flushing is objectionable, dosage may be lowered. However, tolerance to flushing usually develops without loss of efficacy in regard to vasodilation.

Supplied: Bottles of 8 oz. and 16 oz.

LAKESIDE LABORATORIES, INC. Milwaukee, Wisconsin 53201

College of Gastroenterology to fill the vacancy on the Board caused by the death of Dr. Henry A. Monat.

Dr. Wallace M. Yater, Director of the Yater Clinic, has been elected President of the Academy of Medicine of Washington, D. C. for a 2-year term.

Dr. Seymour Alpert and Dr. Harry F. Dowling, a former member of the D. C. Medical Society, have been awarded Certificates of Merit from George Washington University Medical Alumni Association.

A member of the University faculty since 1949, Dr. Alpert is Professor of Anesthesiology in the School of Medicine. He has held office in many scientific organizations, including the D. C. Medical Society. He was cited as Man of the Year in 1964 by the Israel Bonds Committee of Greater Washington.

Dr. Dowling is an alumnus of George Washington University School of Medicine and was associated with the faculty from 1934 to 1950, when he became head of the Department of Preventive Medicine at the University of Illinois. A year later he was named head of its Department of Medicine.

Dr. Margaret M. Nicholson was made an honorary member of the Christ Child Society at its annual business meeting in December. Dr. Nicholson has been a member of the Board of Directors of the Society since 1934. She is Emeritus Clinical Professor of Pediatrics at George Washington University School of Medicine and is on the staff of Children's Hospital.

Dr. Michael J. Halberstam was one of 2 runners-up in the 1965 Medical Economics Awards for the best original articles by physicians. He received a Certificate of Award and $500. These awards are made for outstanding contributions "to the economic knowledge of the medical profession." Dr. Halberstam, an Awards-winner in 1964, described the practical benefits of making house calls for his Medical Society's emergency service.

Dr. Paul R. Wilner, immediate Past President of the D. C. Medical Society, was one of 5 graduates of old Central High School who received Certificates of Distinction at the Alumni Association's 57th Annual Reunion, December 27.

Dr. Charles W. Ordman has succeeded Dr. Ernest A. Gould as President of the Medical Staff of Washington Hospital Center, effective January 1, 1966.

Dr. William A. Howard was elected President of the Society of Medical Consultants to the Armed Forces at the Society's annual meeting, held in December at the National Naval Medical Center in Bethesda, Md.

Dr. Milton M. Greenberg was reëlected Chairman of the Medical Staff of Children's Hospital for 1966 at the annual meeting of the senior attending physicians in December. Reelected Vice Chairman was **Dr. Gerald H. McAteer**, and **Dr. Harold M. Hobart** was named Secretary-Treasurer.

New department chairmen who will serve during 1966 include: **Dr. Sydney Ross**, Pediatrics; **Dr. Richmond S. Paine**, Neurology and Neurosurgery; **and Dr. Max Fischer**, Otolaryngology. **Dr. Thomas M. Foley** was elected Chief of the Orthopedic Section, Department of Surgery, **and Dr. Joseph W. Peabody, Jr.,** Chief of Thoracic Surgery.

Dr. Samuel Q. Mitchell has received a third-year Advanced Clinical Fellowship at Howard University College of Medicine from the District of Columbia Division of the American Cancer Society. Dr. Mitchell served an internship at Freedmen's Hospital from 1958 to 1962 and has been a Clinical Fellow of the American Cancer Society since 1962.

The Southern Medical Association has announced the election of officers to serve its various Sections for the coming year. Four members of the Medical Society are among those officers. **Dr. George P. Blundell** will serve as Chairman of the Section on Pathology; **Dr. James G. Sites**, Chairman of the Section on Obstetrics; **Dr. William J. Tobin,** Vice Chairman of the Section on Orthopedic and Traumatic Surgery; and **Dr. William J. G. Davis**, Vice Chairman of the Section on Ophthalmology.

Officers of each Section will be responsible for arranging its Sectional program for presentation at the 60th Annual Meeting of the Association, which will be held in Washington, D. C., November 14–17, 1966.

WHEN MOTHER'S IRON ISN'T UP TO MOTHERHOOD

IN BRIEF: ACTIONS AND USES: A single dose of Imferon (iron dextran injection) will measurably begin to raise hemoglobin and a complete course of therapy will effectively rebuild iron reserves. The drug is indicated only for specifically-diagnosed cases of iron deficiency anemia and then only when oral administration of iron is ineffective or impractical. Such iron deficiency anemia may include: patients in the last trimester of pregnancy; patients with gastrointestinal disease or those recovering from gastrointestinal surgery; patients with chronic bleeding with continual and extensive iron losses not rapidly replenishable with oral iron; patients intolerant of blood transfusion as *a source of iron;* infants with hypochromic anemia; patients who cannot be relied upon to take oral iron.

COMPOSITION: Imferon (iron dextran injection) is a well-tolerated solution of iron dextran complex providing an equivalent of 50 mg. of elemental iron in each cc. The solution contains 0.9% sodium chloride and has a pH of 5.2-6.0. The 10 cc. vial contains 0.5% phenol as a preservative.

ADMINISTRATION AND DOSAGE: Dosage, based upon body weight and Gm. Hb./100 cc. of blood, ranges from 0.5 cc. in infants to 5.0 cc. in adults, daily, every other day, or weekly. The total iron requirement for the individual patient is readily obtainable from the dosage chart in the package insert. Deep intramuscular injection in the upper outer quadrant of the buttock, using a Z-track technique, (with displacement of the skin laterally prior to injection), insures absorption and will help avoid staining of the skin. A 2-inch needle is recommended for the adult of average size.

SIDE EFFECTS: Local and systemic side effects are few. Staining of the skin may occur. Excessive dosage, beyond the calculated need, may cause hemosiderosis. Although allergic or anaphylactoid reactions are not common, occasional severe reactions have been observed, including three fatal reactions which may have been due to Imferon (iron dextran injection). Urticaria, arthralgia, lymphadenopathy, nausea, headache, and fever have occasionally been reported. Initial test doses of 0.5 cc. are advisable.

PRECAUTIONS: If sensitivity to test doses is manifested, the drug should not be given. Imferon (iron dextran injection) must be administered by deep intramuscular injection only. Inject only in the upper outer quadrant of the buttock, not in the arm or other exposed area.

CONTRAINDICATIONS: Imferon (iron dextran injection) is contraindicated in patients sensitive to iron dextran complex. Since its use is intended for the treatment of iron deficiency anemia only, it is contraindicated in other anemias.

CARCINOGENICITY POTENTIAL: Using relatively massive doses, Imferon (iron dextran injection) has been shown to produce sarcoma in rats, mice and rabbits and possibly in hamsters, but not in guinea pigs. The risk of carcinogenesis, if any in man, following recommended therapy with Imferon (iron dextran injection) appears to be extremely small.

SUPPLIED: 2 cc. ampuls, boxes of 10; 5 cc. ampuls, boxes of 4; 10 cc. multiple dose vials.

in iron deficiency anemia for rapid and predictable replacement of iron reserves

imferon®

(iron dextran injection)

LAKESIDE LABORATORIES, INC. • Milwaukee, Wisconsin 53201

Dr. Jonathan M. Williams returned in December from a trip through Uganda, Kenya and Tanzania in East Africa, and also Addis Ababa and Asmara in Ethiopia. As consultant in neurosurgery to the Peace Corps, he inspected its medical facilities in those countries.

Dr. Oscar B. Hunter, Jr. has been named National Parents Fund Chairman for Trinity College in Washington, D. C. In this post he will head the 1965–66 drive for funds from Trinity parents in support of the College's New Resources program.

In December, 1965, **Dr. Gerald I. Shugoll** was certified as a specialist in cardiovascular disease by the Subspecialty Board for Cardiovascular Disease of the American Board of Internal Medicine.

Obituaries

Raymond W. Bliss, M.D., F.A.C.S., F.A.C.P.

(1888–1965)

Major General Raymond W. Bliss, former Surgeon General of the Army, died, December 12, 1965, at the Davis-Monthan Air Force Base Hospital near Tucson, Arizona. He was elected an Honorary member of the D. C. Medical Society in 1948.

General Bliss was born in Chelsea, Mass., May 17, 1888. He received his medical degree from Tufts University in 1910 and began his Army service in 1913. Most of his professional career was devoted to surgery.

General Bliss served in Hawaii and the Philippines and in 1940 was sent to London as a military observer during the German air raids in World War II. On his return in January 1941 he was appointed Commanding Officer of the Post Hospital at Fort Sill, Okla., and in February 1942 he became Surgeon of the Eastern Defense Command and First Army at Governor's Island, New York. He served as Surgeon General of the Army from 1947 to 1951.

General Bliss was awarded the Distinguished Service Medal and the Legion of Merit by the United States Government, the Legion of Honor by France, and the Award of the Italian Crown by Italy.

He was an Honorary Fellow of the American Association for the Surgery of Trauma, a Fellow of the American College of Surgeons, and a Fellow of the American College of Physicians.

After retiring from active military duty in 1951 he lived in Chocurua, N. H., and spent the winters in Tucson, Arizona. His wife, Mrs. Martha S. Bliss, survives him together with a daughter and a son, Mrs. A. K. Whitehead and Raymond W. Bliss, Jr., both of Tucson.

Vincent Brewer Hungerford, B.S., M.D., F.A.C.S.

(1904–1965)

Dr. Vincent B. Hungerford, a staff surgeon at Providence Hospital during his entire professional career, died at the Hospital, December 10, 1965.

Dr. Hungerford was born in Washington, D. C., February 15, 1905. He received his Bachelor of Science and Doctor of Medicine degrees from Georgetown University, the latter in 1934. He interned for a year each at Providence and Sibley Memorial Hospitals, then returned to Providence for a 2-year residency in surgery.

Dr. Hungerford remained on the active staff of Providence from 1938 until his death. He was also Associate in Surgery at D. C. General Hospital and St. Elizabeths Hospital.

He was a Fellow of the American College of Surgeons, a member of the American Medical Association, and an Active member of the Medical Society of the District of Columbia since 1939. He was also a member of the Southern Medical Association, the American Society of Abdominal Surgeons, the Washington Academy of Surgery, and the Georgetown Clinical Society. He was active in the Police Boys Club. At the Kenwood and Columbia Country Clubs he indulged his love of golfing.

Surviving him are his wife, Mrs. Harriet E. Hungerford, and 2 daughters and 2 sons, Harriet, Laura, Vincent and Esten, of the home address, 209 Primrose Street, Chevy Chase, Md. Another daughter, Mrs. Mary T. Gaffney, lives in Baltimore, Md. He also leaves 3 sisters, Mrs. Marie Abell, of Leonardtown, Md.; Mrs. Marion Norris, of Washington; and Mrs. Hazel Tippet, of Baltimore, Md., and a brother, Alderbert Hungerford, of Bryans Road, Md.

39.7
90.3
76.9
approximating the diuretic efficacy of meralluride

METAHYDRIN®
(trichlormethiazide)

To determine the relative efficacy of thiazide diuretics in congestive heart failure, Metahydrin (trichlormethiazide) and three other thiazides were measured against Mercuhydrin® (meralluride injection)—the standard diuretic. "The results leave little doubt that the diuretic efficacy, that is, the 'ceiling effect' in these terms, is not the same for different thiazides."* The assays ranged from about 40% of the effectiveness of Mercuhydrin through 67%, 77% to 90% for Metahydrin. The latter two values were thought to be significantly different from the lowest value and to be therapeutically important.

*Gold, H., *et al*: Closed Panel Conference: Present Status of the Management of Congestive Failure and Advances in Diuretic Therapy, Journal of New Drugs, 1:177, July-August, 1961.

LAKESIDE LABORATORIES, INC.
Milwaukee, Wisconsin 53201

IN BRIEF: ADMINISTRATION AND DOSAGE: One 2 mg. or 4 mg. tablet once or twice daily. In acute, severe decompensation, Mercuhydrin® (meralluride injection) may be necessary initially.

PRECAUTIONS: As with all effective diuretics, vigorous therapy may produce electrolyte depletion. Patients with severely reduced renal function should be observed carefully since thiazides may be contraindicated. Care should be taken with patients predisposed to diabetes or gout. Patients with a tendency to potassium deficiency, as in hepatic cirrhosis or diarrheal syndromes, or those under therapy with digitalis, ACTH, or certain adrenal steroids, also should be watched carefully.

SIDE EFFECTS: Nausea, flushing, constipation, skin rash, muscle cramps and gastric discomfort have been occasionally noted; rarely thrombocytopenia and bone marrow depression, photosensitivity, cholestatic jaundice, pancreatitis, perimacular edema, gout and diabetes have been caused by administration of thiazides.

CONTRAINDICATIONS: Complete renal shutdown; rising azotemia or development of hyperkalemia or acidosis in severe renal disease; demonstrated hypersensitivity.

HOW SUPPLIED: Bottles of 100 and 1000 tablets.

Eugene Osmun Barr, B.S., M.D.

(1895–1965)

Dr. E. Osmun Barr, Washington surgeon and a pioneer in aviation medicine, died, December 21, 1965, at Doctors Hospital. He had relinquished his practice at 1801 Eye Street, N.W. in 1964 due to ill health. His home was at 3623 Chesapeake Street, N.W.

Born in Washington, D. C., March 25, 1895 to A. Eugene and Mazie Sencindiver Barr, Dr. Barr attended Washington schools, graduating from Eastern High School. After graduating in medicine from the University of Virginia in 1924, he interned at St. Luke's Hospital in New York City the following year and spent another year as surgical resident at the same hospital.

He began his practice of surgery in the District of Columbia in 1927. He was associate attending in surgery for many years at George Washington University Hospital, Garfield Memorial Hospital, Emergency Hospital and Doctors Hospital. He taught in the Department of Surgery at George Washington University from 1928 to 1937.

Dr. Barr served as a bomber pilot in World War I. He received a citation from Victor Emmanuel III, King of Italy, in 1918 for his work in training pilots in the use of multi-motored bomber planes. He maintained his interest in aviation and authored a book, "Flying Men and Medicine," which was published in 1943. Prior to his death he was engaged in the study of space medicine and rocket designing with the view of publishing his data later in a book.

Dr. Barr was elected to Active membership in the District Medical Society in 1928. He was a member of the American Medical Association, the Southern Medical Association, the American Association for Study of Neoplastic Diseases, the American Society of Abdominal Surgeons, and the Washington Medical and Surgical Society. He also belonged to the Aero-Space Association and the Federation Aeronautique Internationale. He was a member of Phi Beta Kappa and many other fraternal and social organizations.

Surviving him are his wife, Mrs. Mildred Hodgins Barr, of the home address; a son, E. Osmun Barr, Jr. of 5038 Bradley Blvd., Chevy Chase, Md.; a brother, Dallas M. Barr, of Bethesda, Md.; and a sister, Mrs. Hugh S. Kearfott, of Martinsville, Va.

Merrill Miles Cross, M.D.

(1912–1965)

Dr. Merrill M. Cross, an Associate member of the Medical Society of the District of Columbia since 1947, died, November 13, 1965 at Holy Cross Hospital in Silver Spring, Md., the hospital which he helped establish 2 years ago.

Dr. Cross was born in South Lancaster, Mass., May 20, 1912 to Myron M. and Myrtle E. Cross. His mother survives him. He attended Lawrence Academy in Groton, Mass., later, the University of Vermont, graduating from its Medical School in 1937. He interned at the Worcester (Mass.) Memorial Hospital.

Dr. Cross began a general practice in Clinton, Mass. In 1941 he enlisted in the Army Medical Corps, transferring to the Air Force in 1942 and becoming a Flight Surgeon. He retired as Colonel. Among the service decorations he received were the Bronze Star, the Legion of Merit, and the Croix de Guerre.

Following the war, Dr. Cross opened an office for general practice in Silver Spring. He was on the staff of Suburban Hospital. He was the first Chief of Staff at Holy Cross Hospital and had been a Board member since the Hospital's completion in January 1963.

Dr. Cross was a Past President of the Mont-

Serving the Doctors of Metropolitan Washington
Since 1942

PROFESSIONAL BUSINESS MANAGEMENT, INC.

John C. Post, *President*

A Personal Service Designed to Assist the Doctor with the Business Side of Medical Practice.

• *Medical Management Specialists* •

1012 20th Street, N.W Washington, D.C. 20036 Tel. FEderal 8-3200

the price of "success"

190

102

Hypertension has been called the price of success... and in some life-situations, the cost of failure. In either event, Metatensin lowers blood pressure, cushions the patient against stress and retards the progress of disease. Metatensin is effective and economical. It is well-tolerated over long periods.

THERAPY
YOU CAN STAY
WITH

METATENSIN®

EACH SCORED TABLET CONTAINS:
Metahydrin® (trichlormethiazide) 2 mg. or 4 mg. Reserpine 0.1 mg.

In Brief: Patients with hepatic cirrhosis or diarrheal syndromes, or under therapy with digitalis, ACTH, or potassium-losing steroids, should be observed for signs of hypokalemia. With thiazides, electrolyte depletion, diabetes, gout, granulopenia, nausea, pancreatitis, cholestatic jaundice, flushing, mild muscle cramps, constipation, photosensitivity, acute myopia, perimacular edema, paresthesias, neonatal bone marrow depression in infants of mothers who received thiazides during pregnancy, skin rash or purpura with or without thrombocytopenia, may occur. With reserpine, untoward effects may include depression, peptic ulcer and bronchial asthma. Withdraw medication at least 7 days prior to electroshock therapy, 2 weeks prior to elective surgery. Contraindications are complete renal shutdown, rising azotemia or development of hyperkalemia or acidosis in severe renal disease.

Supplied: Metatensin tablets, 2 mg., 4 mg. — bottles of 100 and 1000.

LAKESIDE LABORATORIES, INC. Milwaukee, Wisconsin 53201

gomery County (Md.) Medical Society and a former Vice President of the Medical and Chirurgical Faculty of the State of Maryland. He was President of the Maryland Academy of General Practice in 1955.

He was very active in community work. He served for 10 years as medical adviser to the Silver Spring Fire Department.

Surviving him are his wife, Mrs. Dorothy L. Cross, of the home address, 8503 Cloverfield Road, Silver Spring; 2 daughters, Mrs. Phillip F. Carothers, of Newport, R. I., and Mrs. Peter MacElhiney, of Springfield, Mass. He also leaves 2 stepchildren, Gordon W. Bonnette III, of Hyattsville, Md. and Mrs. Kenneth Moorefield, of South Boston, Va.

Donald Nelson, B.A., M.D.

(1927–1965)

Dr. Donald Nelson, an Associate member of the Medical Society of the District of Columbia, with offices in Silver Spring, Md., died, December 14, 1965 at Suburban Hospital of injuries he sustained in an auto accident the preceding day.

Dr. Nelson was born in New York City, February 25, 1927, to Benjamin and Gertrude Nelson, who survive him. He attended schools in Mt. Vernon, N. Y. and graduated from Columbia University in 1949. He studied medicine at New York University—Bellevue Medical College, receiving his medical degree in 1953. The following year he interned at King's County Hospital in Brooklyn. He served as resident physician at 2 Washington hospitals—D. C. General, 1954–55 and 1956–57, and Georgetown Hospital, 1955–56 and 1957–58.

He opened his offices for the practice of internal medicine at 10620 Georgia Avenue in Silver Spring in 1958. He was on the staff of the Washington Hospital Center and had courtesy privileges at Georgetown and Suburban Hospitals and Washington Sanitarium. He was on the teaching staff of Georgetown University as a Clinical Instructor of Medicine.

He was elected to Associate membership in the D. C. Medical Society in 1958. He was also a member of the Montgomery County (Md.) Medical Society and the Washington Heart Association. He attended Temple Shalom and was a member of B'nai B'rith Wheaton Lodge.

He leaves his wife, Mrs. Phyllis Nelson, and 2 small children, Joseph and Lori, of the home address, 11128 Norlee Drive, Silver Spring. In addition to his parents, who reside at Mt. Vernon, N. Y., he leaves a brother, Gerald Nelson, of New York City.

Ralph John Haws, B.S., M.D.

(1891–1965)

Dr. Ralph J. Haws, formerly Chief of Surgery at St. Elizabeths Hospital, died, November 2, 1965, in Florida. His home was at 12815 N.E. 11th Avenue, North Miami.

Dr. Haws was born in Reading, Pa., September 1, 1891. He graduated from Jefferson Medical College in Philadelphia in 1915. Following service in the Army Medical Corps during World War I, he practiced medicine in Reading until 1923. From 1916 to 1923 he was on the surgical staff of Reading General Hospital. From 1923 to 1942 Dr. Haws was Chief of Surgery at St. Elizabeths Hospital. He was also Associate Professor of Surgery at Georgetown University School of Medicine. He reënlisted in the Army Medical Corps in World War II and served until 1946, retiring as Colonel. He returned to St. Elizabeths, but, due to ill health, resigned in 1946 and in 1948 moved to Florida.

He was elected to Active membership in the Medical Society of the District of Columbia in 1931, and continued his membership until 1946. He was a Fellow of the American College of Surgeons, a member of the Washington Academy of Surgeons, and a Past President of St. Elizabeths Hospital Medical Society. He was affiliated with many other military and fraternal organizations.

Surviving him are his wife, Mrs. Eva Haws, of Miami; a son, Randle S. Haws, of East Aurora, New York; and two sisters, Miss Carrie Haws and Mrs. Beulah H. Diefenderfer, both of Reading, Pa.

a rapid lift from the hell of depression

often relieves mental pain in 2-5 days

Doré Illustration
from
Dante's Inferno

NORPRAMIN®
(desipramine hydrochloride)

Norpramin is a rapid-acting specific drug for the treatment of depression. Depressive signs and symptoms—sometimes described as "mental pain"—typically begin to improve in 2-5 days. Patients are more hopeful, less empty and less weighed down by their troubles. Norpramin has only slight sedative qualities, nevertheless anxiety *secondary to depression* is frequently relieved as depression is lifted. If anxiety or tension persists it can be controlled by adding a tranquilizer or by reducing dosage. Norpramin is not a MAO inhibitor. Side effects are usually mild.

DOSAGE AND ADMINISTRATION

Optimal results are obtained at a dosage of about 150 mg./day—two 25 mg. tablets t.i.d. After achieving optimal results, a maintenance dose (50-100 mg./day) should be sought.

LAKESIDE LABORATORIES, INC. Milwaukee, Wisconsin 53201

IN BRIEF:

Indications: In depression of any kind—neurotic and psychotic depressive reactions; manic-depressive or involutional psychotic reactions.

Contraindications and Precautions: Glaucoma, urethral or ureteral spasm, recent myocardial infarction, severe coronary heart disease and epilepsy. Should not be given within two weeks of treatment with a monoamine oxidase inhibitor. Safety in human pregnancy has not been established.

Adverse Effects: Side effects, usually mild, may include: dry mouth, constipation, dizziness, palpitation, delayed urination, "bad taste," sensory illusion, tinnitus, agitation and stimulation, sweating, drowsiness, headache, orthostatic hypotension, flushing, nausea, cramps, weakness, blurred vision and mydriasis, rash, allergy, transient eosinophilia, granulopenia, altered liver function, ataxia and extrapyramidal signs.

Supplied: Norpramin (desipramine hydrochloride) tablets of 25 mg., in bottles of 50, 500 and 1000.

BOOK REVIEWS

Medical Department, United States Army: Surgery in World War II. Thoracic Surgery, Volume II. Colonel Arnold Lorentz Ahnfeldt, MC, USA, Editor-in-Chief; Frank B. Berry, M.D., Editor for Thoracic Surgery; and Elizabeth M. McFetridge, M.A., Associate Editor. Prepared and published under the direction of Lt. General Leonard D. Heaton, The Surgeon General, United States Army. Price, $7.25. Pp. 615, with 222 illustrations, 3 color plates, 24 tables. Washington, D.C.: Superintendent of Documents, U.S. Government Printing Office, 1965.

The second volume of "Surgery in World War II: Thoracic Surgery" is a handsome book, well produced and beautifully illustrated.

The style is somewhat uneven, as is not unusual in books written by many authors, and the frequent anecdotal references to what "Major (later Colonel) so and so" said, while historically correct, seem clumsy in the text.

The importance of conservative treatment of hematoma and laceration of the lung is well brought out. It is curious that there was universal preference for closure of these contaminated wounds with interrupted silk sutures, although the danger of using silk pericostal sutures in contaminated cases is stressed elsewhere.

The section on "wet lung," while long and detailed, does not present this as a clear-cut entity. It emerges as an ill-defined mixture of traumatic edema and retained secretions. In contrast, the sections on hemothorax, decortication and foreign bodies in the heart are outstanding.

Thoughout the book there is an overall picture of rapid early decline in extensive forward surgery, with increasing conservatism in treatment at all levels from forward areas to the zone of the interior. There is a good short review of the wide variety of surgery performed in the zone of the interior with some pertinent comments on the difficulty of getting these patients back to duty. The notion that a patient who had had thoracic surgery is somehow crippled dies hard.

There are many excellent lessons to be learned or relearned from this book. The book has been too long in coming, but this in a way heightens one's historical perspective and one's admiration of the excellent results obtained by thoracic surgeons in World War II, almost a quarter of a century ago.

Nicholas P. D. Smyth, M.D.

Surgery in America: From the Colonial Era to the Twentieth Century. Selected Writings. Edited by A. Scott Earle, M.D. Price, $8.50. Pp. 280, with 44 illustrations. Philadelphia: Saunders, 1965.

In his preface to this anthology, the editor writes, "The story of surgery's growth in this country has been told—and told well—by the men who contributed most to its progress." He then proves this thesis with a fine collection of well assembled and annotated articles by American surgeons.

The 24 individual selections cover the sweep of American surgical literature from colonial handbills with advertisements of itinerant lithotomists to the addresses of William Stewart Halsted.

Included are: "Extirpation of Diseased Ovaria" and "Observations on Diseased Ovaria" by Ephraim McDowell, "Excerpts from His Journal" by William Beaumont, "Inhalation of Ethereal Vapor for the Prevention of Pain in Surgical Operations" by John Collins Warren, and "Operation for Vesico-Vaginal Fistula" (for my money the most frank and fascinating account in the book) by James Marion Sims. Military surgery in the Revolutionary and Civil Wars is represented by the diaries of individual physicians, and instructive excerpts from cases in the Massachusetts General Hospital prior to 1846 are included.

The illustrations are well reproduced, including not only portraits of the represented surgeons, but, more interestingly, their instruments.

Kept for a week or so at the bedside table this book will provide a vivid sense of American surgical history. I cannot imagine any surgeon, surgical resident, or medical student who would not be delighted to receive this admirable volume as a gift.

Harry Zehner, Jr., M.D.

Pediatric Electrocardiography. Normal and Abnormal Patterns, Incorporating the Vector Approach. Warren G. Guntheroth, M.D. Price, $7.00. Pp. 150, with illustrations by the author. Philadelphia: Saunders, 1965.

This monograph represents an up-to-date review of electrocardiography and vectorcardiography as they apply to children. Much of the text consists of statements taken out of context from a moderately large reference bibliography. As a result, the development of concepts of electrocardiography is chaotic, rendering the text difficult to read.

The chapter on Lead Systems is disarming. The author assumes a great knowledge on the part of the reader of the basic physics of electricity and volume conductors. This chapter may be very confusing to the unsophisticated student.

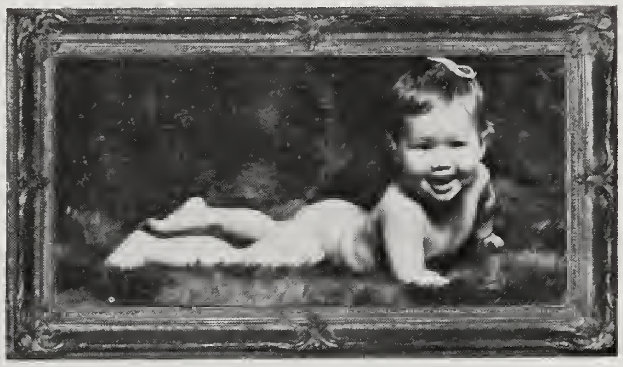
Chapter 4 on Routine Interpretation brings together all the data from various reference sources as related to the various normal values for heart rates, intervals and amplitudes of the various complexes. A special feature of the book is a separate insert of tables and figures which have been duplicated to allow the reader this quantitative information available in one ready source.

Although the author states that the interpretation of electrocardiograms and vectorcardiograms should be based on statistically defined normal ranges, he constantly describes vector loops by their morphology, the equivalent of pattern interpretation of the electrocardiogram. This is not necessarily criticism of the

(Continued on page 36)

Turn a bundle of colic

into a bundle of joy



COLIC, often in part a reflection of family tension, adds sleepless nights to patients' and parents' distraught days. Pediatric Piptal with Phenobarbital slows down spasm, diminishes pain and crying, improves feeding patterns . . . permits sleep and rest . . . for patient and family.

Pleasant tasting Pediatric Piptal with Phenobarbital is miscible in milk, formulas and fruit juices, and may also be administered by dropper directly on the infant's tongue. Dosage is 0.5 cc. 15 minutes before feeding; in severe cases, 1.0 cc. four times daily. High doses may occasionally cause constipation with tenesmus and, rarely, flushing without fever. Contraindicated in bowel obstruction or sensitivity to phenobarbital or anticholinergics. Available in 30 cc. dropper bottles, droppers calibrated to deliver 0.5 cc.

PEDIATRIC PIPTAL®
WITH PHENOBARBITAL

each cc. contains: 6 mg. phenobarbital (warning: may be habit forming); 4 mg. Piptal® (pipenzolate bromide), and 20% alcohol in a pleasant-tasting solution.

LAKESIDE LABORATORIES, INC.
Milwaukee, Wisconsin 53201

Book Reviews

(*Continued from page 34*)

author but represents lack of sufficient vector data at the present time to have statistically significant normal ranges.

The chapter on disorders of rate mechanisms and rhythm is quite clearly written with excellently displayed electrocardiograms of the various arrhythmias.

The chapter entitled The Normal Electrocardiogram describes a normal electrocardiogram for various age groups. As one reads this one gets lost in the subtle differences between the various groups. Except for the differences which take place over the first several months of life, most of this could have been deleted from the text.

Finally, the chapter on Hypertrophy states in essence that hypertrophy is diagnosed when voltages obtained in the various leads exceed the normal range of values contained within the various tables.

It is the reviewer's opinion that the definitive text on pediatric electro- and vectorcardiography has yet to be written. At no point in this text was mention made of the influence of chest size, body build, sex, etc. on the various standard, augmented and chest leads. This work must be done before another textbook on pediatric electrocardiography is written.

Lewis P. Scott III, M.D.

Atlas of Cataract Surgery. John M. McLean, M.D., F.A.C.S. Illustrated by Shirley Baty. Price, $20.00. Pp. 130, with 80 figures. St. Louis: Mosby, 1965.

A personalized book about cataract surgery could only be written by a respected man like Dr. John McLean who is a great authority in this field. As usual he writes concisely and without pretension. This is not an ordinary medical atlas. Employing excellent illustrations, the author weaves a discussion of cataract surgery from the preoperative preparation of the patient through anesthesia and surgical techniques, to the handling of complications and postoperative care. There is no attempt to aimlessly survey the field. Dr. McLean presents only his logical approach, acquired by years of experience and critical thinking.

So many of Dr. McLean's concepts in lens surgery have been adopted over the years that recent, well-trained residents already use many of the discussed techniques, perhaps unaware of the debt they owe the author. This is, however, more than a basic teaching manual. The use of cryosurgery, the handling of vitreous loss, and the new approaches to congenital cataracts are topics so current that they have not previously appeared in published textbooks.

There is no other modern text with equal clarity, authority and brevity that the inquiring ophthalmic resident can turn to for cataract surgery. Most experienced surgeons will find some part of the book worth reading, be it for new maneuvers or merely as a stimulus to reëxamine their own techniques. Finally, for the teacher or bibliophile, the vivid and well selected illustrations alone make it a worthwhile library addition.

David K. Berler, M.D.

Regression of Function in Pseudo-Hypertrophic Muscular Dystrophy. Antje Price, B.S., O.T.R. Paper. Pp. 119, with 21 illustrations and 14 tables. Milwaukee: North Shore Publishing Co., 1965.

This monograph, recorded as no. 1, published by the American Occupational Therapy Association, would seem to initiate a venture of sponsorship of similarly related and presumably approved works.

On reading the title, one can assume—and correctly—that this is a highly specialized aspect of a specialized medical disease. The prime purpose of this work is the study of "the nature of the progression of the disability . . . studied longitudinally." It attempts to establish a "typical course of the disease" and "baselines" from which limitations can be observed. Although the material is authored by an occupational therapist, it is the culmination of a coöperative venture by neurologists, psychiatrists, psychologists, social workers, occupational therapists, and other paramedical disciplines. The report consists of 3 main sections, the first of which records findings on the course of the disease, the second deals with emotional, behavioral, and therapeutic aspects, and the final is concerned with the development of deformity.

These various sections are written in a very diverse style which makes interest and readability quite variable. The first section is rather dull and difficult while the second is pleasant and easy. The author admits that the sampling is small (23 boys aged 6 to 21 years) and the range of study quite wide (4 months to 6½ years).

The section on emotional and behavioral aspects is particularly recommended for easy reading, and though it is written on a rather superficial psychodynamic level, it does offer useful insights into the problems faced by the patients and the therapeutic milieu.

It is unfortunate that exact definition and delineation of the disease were omitted, and it would have been enlightening if studies of the various chemical and enzyme systems (e.g., creatine-creatinine, kinase, etc.) were reported, if they were done. Of particular value were the various scales of testing and measuring performance which, indeed, may represent the main value of the entire monograph.

Of more than casual interest is the fact that although the work was published in 1965, there is no reference later than 1960. Surely, something of significance germane to the topic has been done in the interim.

Certainly, the monograph should be available to neurologists, psychiatrists, physiatrists, orthopedic surgeons, occupational therapists, physical therapists and others interested in the problem but it hardly seems warranted to be included on the "must" of one's library or reading list. It is hoped that future publica-

(*Continued on page 38*)

Mother loves to see you eat.

To her, food is Health. Food is Strength. Food is Love.

It never crosses her mind that overweight children tend to become overweight adults. Or that all that Love is going to be a problem someday.

Amid the welter of confusing food and fad claims, only you, as a professional, can change her thinking. Not alone. Not overnight. But you can, by recommending long-range weight control through good eating habits and everyday nourishing foods.

Naturally balanced diets and palatable, nutritious dairy foods go together. They always have.

Project Weight Watch has been initiated to assist you. Its scope is nationwide, its purpose is to focus professional attention on the problem.

To help you translate your concern to your patients, a portfolio of materials is available. Send for it. Help Herbie. He can't help himself.

PROJECT WEIGHT WATCH

Dairy Council of Greater Metropolitan Washington, D. C.
1511 K Street, N. W. Washington, D. C. 20005

**"Eat, Herbie, eat.
Don't you want
to grow up
big and strong?"**

Book Reviews

(Continued from page 36)

tions of the American Occupational Therapy Association will have a greater value.

Julius Hoffman, M.D.

Ciba Foundation Symposium: Colour Vision: Physiology and Experimental Psychology. Edited by A. V. S. de Reuck, M.Sc., D.I.C., A.R.C.S., and Julie Knight, B.A. Price, $12.50. Pp. 382, with 98 illustrations. Boston: Little, 1965.

An authoritative and comprehensive research symposium considering the current morphological, biochemical, electrophysiological, and psychological concepts of color perception, this work is not primarily directed toward the clinical aspects of color vision. Proceeding from the concept that pigment variability is achieved by discrete structural forms of the opsonins or their linkages to the prosthetic groups of the visual pigments, microphotometric evidence is presented for cone pigment spectra with wavelengths corresponding to blue, green, and red consistent with the Young-Helmholtz theory.

Micro-electrode studies show that these receptors, presumably acting through the second-order bipolar cells, exert either color excitatory or inhibitory effects on the ganglion cells, corresponding to the Hering theory based on an opponent color coding system. Each receptor does not have its private route to the brain; 3-color information is somehow processed in the retina and encoded into 2-color on-off signals by each of the color-sensitive retinal ganglion cells for transmission to the higher visual centers.

The scope of this outstanding symposium from the Ciba Foundation considers the chemical structure of the visual pigments, adaptation of visual pigments to the photic environment, duality and synaptology in the retina, the retinex, the genetics of color-blindness, after-images as a means of investigating rods and cones, spectral sensitivity of the rabbit retina, and lines for future research.

A. Raymond Pilkerton, M.D.

WITH THAT
"JUST
PICKED"
TASTE!
Sealtest
ORANGE
JUICE

MAXWELL
AND
TENNYSON
INC.
PHARMACISTS

"Where Pharmacy is a Profession"

M&T

Washington, D. C.

1801 Eye Street	NAtional 8-0206
1835 Eye Street	STerling 3-0360
1726 Eye Street	298-6540

Prescriptions called for and delivered without extra charge

Biologicals–Vaccines
Serums
Hypo-Allergenic Cosmetics

Diseases of the Newborn. Alexander J. Schaffer, M.D., with a Section on Neonatal Cardiology by Milton Markowitz, M.D., and a Section on Fluid and Electrolyte Therapy by Lawrence Finberg, M.D. Price, $22.00. Pp. 1023, illustrated. Philadelphia: Saunders, 1965.

Dr. Schaffer in his new, second edition of "Diseases of the Newborn" has again provided an extremely welcome addition to the library of physicians who are responsible for the care of newborn infants. Like his first edition, the newer one is clearly and concisely written, covers the entire subject well, and follows the principle that the book is for practitioners written by a practitioner.

The revised section in the book on cardiovascular disorders, written by Dr. Milton Markowitz, is indeed an extremely clearly written treatise on heart disorders of the newborn and simply explains a very difficult subject. The chapter on Inborn Errors of Metabolism has been revised and here again Dr. Schaffer has done a very complete job. The chapter on Chromosomal Aberrations is very clearly written and forms an intricate part of an entire section of the book dealing with "odd-looking babies."

As in the first edition, the photographs are excellent. There is no doubt that the new, second edition will again serve as a classic reference text on problems of the newborn, and Dr. Alexander Schaffer must be saluted for his magnificant performance.

Morris Feitel, M.D.

Announcing

EUTRON™

pargyline hydrochloride 25 mg. and methyclothiazide 5 mg.

for control of moderate to severe hypertension

Unique combination produces greater antihypertensive effect with lower doses

Eutron is the combination in a single tablet of 25 mg. Eutonyl (pargyline hydrochloride) and 5 mg. Enduron (methyclothiazide). This combination produces greater therapeutic effect than that of either component used alone. Side effects may be milder, too, as dosages are generally lower. The effective dosage is usually one tablet, once daily. Tablets are scored for greater dosage flexibility.

100 No 6878
Filmtab®
EUTONYL™
25 mg PARGYLINE HYDRO CHLORIDE
Caution Federal (U.S.A.) law prohibits dispensing without prescription
100 No. 6812
Tablets (Grooved)
ENDURON™
METHYCLO-THIAZIDE
Caution Federal (U.S.A.) law prohibits dispensing without prescription

Each Eutron tablet contains two proven antihypertensives in the ratio shown to be most effective in most patients.

TM—TRADEMARK

New **EUTRON** extends your range of treatment in moderate to severe hypertension

A single product you can use even in the presence of congestive heart failure or edema

Eight out of 10 patients respond

In clinical trials, Eutron produced normotension or a significant reduction in blood pressure in eight out of 10 patients studied. The rationale for the product is this: Eutonyl used alone is a potent antihypertensive. Its antihypertensive action is markedly enhanced by Enduron, a potassium-sparing thiazide.[1,2,3] The combination (Eutron) thus produces greater antihypertensive effect with lower dosages of the Eutonyl component, and milder side effects may be seen.

512214

1. Torosdag, S., Schvartz, N., Fletcher, L., Fertig, H., Schwartz, M. S., Quan, R. F. B., and Bryant, J. M., Pargyline Hydrochloride as an Antihypertensive Agent With and Without A Thiazide, Am. J. Cardiol., 12:822, Dec., 1963.

2. Pollack, P. J., Pargyline Hydrochloride and Methyclothiazide Combined In The Treatment of Hypertension, Cur. Thera. Res., 7:10, Jan., 1965.

3. Bryant, J. M. et al., Antihypertensive Properties of Pargyline Hydrochloride, New Non-Hydrazine Monoamine Oxidase Inhibitor Compared with Sulphonamide Diuretics, J.A.M.A., 178; 406, Oct., 1961.

BP reductions in the recumbent and sitting positions often are nearly as great as in the standing. In clinical trials, the average *recumbent* BP reduction was 36/18 mm. Hg.

The average *standing* reduction in clinical trials was 45/22 mm. Hg. Thus the difference between the standing and recumbent readings was only 9/4 mm. Hg.

Significantly lowers blood pressure in all body positions; less likelihood of orthostatic hypotension

In clinical trials, the average reduction in standing blood pressure was 45/22 mm. Hg.; in the sitting position it was 48/20 mm. Hg.; and in the recumbent position, 36/18 mm. Hg.

Because Eutron effectively reduces blood pressure in all body positions, there is reduced likelihood of orthostatic symptoms or hypotension.

This was reflected in the relatively mild character of side effects seen in clinical trials (see below).

Smooth and gradual onset

Onset of antihypertensive action is usually quite smooth. Initial reduction of systolic and diastolic readings is usually seen within a week – maximum reduction in seven to ten days.

Less troublesome side effects may be seen; frequent improvement in "sense of well-being"

Fewer than 1% of patients studied discontinued Eutron therapy because of side effects. This is due in part to the relatively low dosage needed with the combination. Usual recommended dose is one tablet daily–that is, 25 mg. Eutonyl with 5 mg. Enduron. *This is about half the usual therapeutic dose of Eutonyl given alone.* As a consequence side effects may be milder. And, as with Eutonyl given alone, the patient may well note an increased sense of well being. This is in distinct contrast to most other antihypertensive therapy.

ABBOTT

Prescribing
information for
EUTRON

INDICATIONS: Eutron (pargyline hydrochloride and methyclothiazide) is indicated in the treatment of patients with moderate to severe hypertension, especially those with severe diastolic hypertension. It is not recommended for use in patients with mild or labile hypertension amenable to therapy with sedatives and/or thiazide diuretics alone.

CONTRAINDICATIONS: Eutron is contraindicated in patients with pheochromocytoma, advanced renal disease, paranoid schizophrenia and hyperthyroidism. Until further experience is gained it cannot be recommended for use in patients with malignant hypertension, children (under 12 years of age), or pregnant patients.

The concomitant use of the following is contraindicated: other monoamine oxidase inhibitors; parenteral forms of reserpine or guanethidine; sympathomimetic drugs; foods high in tyramine such as cheese; imipramine and amitriptyline, or similar antidepressants; methyldopa. A drug-free interval of two weeks should separate therapy and use of these agents.

WARNINGS: Pargyline hydrochloride is a monoamine oxidase inhibitor. Patients should be warned against eating cheese, and using alcohol, proprietary drugs or other medication without the knowledge of the physician. When it is necessary to administer alcohol, narcotics (notably meperidine), antihistamines, anesthetics, barbiturates and other hypnotics, sedatives, tranquilizers, or caffeine, these agents can be used cautiously at a dosage of ¼ to ⅕ the usual amount. Avoid parenteral administration where possible. Withdraw pargyline two weeks before elective surgery.

Patients should be warned about the possibility of postural orthostatic hypotension. Those with angina or other evidence of coronary disease should not increase physical activity. Pargyline may lower blood sugar. Potassium depletion is unlikely at the recommended dosage, but if it occurs, adjust dosage or withdraw or provide added natural food sources of potassium; potassium tablets should be avoided wherever possible, as bleeding or obstructive ulceration of the small bowel has been associated with their use; potassium levels should be especially watched if the patient is on digitalis or steroids, or if hepatic coma is impending.

PRECAUTIONS: When determining the antihypertensive effect of Eutron, blood pressure should be measured while the patient is *standing*. Use with caution in hyperactive or hyperexcitable persons. Such persons may show increased restlessness and agitation. Withdraw drug during acute febrile illness. Watch patients with impaired renal function for increasing drug effects or elevation of BUN and other evidence of progressive renal failure; withdraw drug if such alterations persist and progress. Pargyline has not been shown to cause damage to body organs or systems. As with all new drugs, complete blood counts, urinalyses, and liver function tests should be performed periodically. The drug should be used with caution in patients with liver dysfunction. With prolonged therapy, examine patients for change in color perception, visual fields, and fundi.

Elevated blood urea nitrogen, serum uric acid or blood sugar are possibilities attributable to the methyclothiazide in Eutron. Methyclothiazide may also reduce arterial response to pressor amines. Blood dyscrasias, including thrombocytopemia with purpura, agranulocytosis and aplastic anemia, have been seen with thiazide drugs.

SIDE EFFECTS: The use of pargyline may be associated with orthostatic hypotension. Mild constipation, slight edema, dry mouth, sweating, increased appetite, arthralgia, nausea and vomiting, headache, insomnia, difficulty in micturition, nightmares, impotence, delayed ejaculation, rash, and purpura have been encountered with pargyline. Hyperexcitability, increased neuromuscular activity (muscle twitching) and other extra-pyramidal symptoms have been reported. Drug fever is extremely rare. Congestive heart failure has been reported in a few patients with reduced cardiac reserve. Nocturia has been observed with the combination. If side effects persist, despite symptomatic therapy or reduction of the dose, discontinue the drug.

ABBOTT

512214

OXYGEN
24-HOUR SERVICE
363–9595

IPPB
COMPRESSORS
OXYGEN
SALES
RENTALS

Inhalation Therapist on Duty
EM 3–9595

ACCREDITED SURGICAL CO.
Medical and Surgical Supplies
3226 Wisconsin Ave., N.W.

Surgical Supplies and Equipment

Complete Fitting Service for
Ladies and Men

NELSON KLOMAN SURGICAL SUPPLY CO.
1018 - 18th Street, N.W.
Washington 36, D. C.

Telephone: FEderal 8-5245

THE GIBSON COMPANY

60 years serving the medical profession

922 19th Street, N.W.
Federal 8-2688

Medical and Surgical Supplies
Hospital, Invalid and Sickroom Supplies
Surgical Fitting Specialists—Man and Woman
Private Fitting Rooms

Doctors

1st floor suites in a new luxury hi-rise on upper Connecticut Avenue. Management will partition to suit tenant. Rooftop pool privileges plus 24 hour secretarial service. Adequate parking.

REGENCY
HOUSE

5201 Connecticut Avenue, N.W., Washington, D. C.
Or Phone 363-4335

CAPITAL NURSE
REGISTRY

(Est. 1910)
Licensed
Practical
Nurses and
Practical
Nurses
Recommended
by Physicians

All Nurses Have Had Hospital Training

One of Washington's outstanding
Registries, serving physicians
and surgeons since 1910

LICENSED BY DISTRICT OF COLUMBIA

24 Hour Telephone Service

RAndolph 3-2600 or 3-1771

CLASSIFIED ADVERTISEMENTS

Advertisements under the following headings are charged at the rate of $5.00 for one insertion of 50 words or less; $4.00 each for three insertions; and $3.00 each for six insertions or more. All advertisements are payable in advance; the Editorial Board reserves the right to edit copy. Closing date for new copy, 15th of month preceding date of issue.

Classified advertisements of a professional nature are free to members.

SITUATIONS WANTED

RADIOLOGIST, Board-certified, university trained, assistant professor; age 32, married; licensed in D.C. and Maryland, desires private practice opportunity or equal group association. Address Box 69, 2007 Eye Street, N.W., Washington, D. C. 20006.

PHYSICIANS WANTED

PHYSICIAN for responsible position in clinical research and development activities of large Midwestern chemical company. Ability to communicate effectively with other medical and technical people essential. Excellent career potential in internal medicine or dermatology. An equal opportunity employer. Send resume to Box 81, 2007 Eye Street, N.W., Washington, D. C. 20006.

GP OR INTERNIST to assist with busy practice beginning July 1 and share fully equipped office on fee-for-service basis. No investment required. Address Box 42, 2007 Eye Street, N.W., Washington, D.C. 20006.

PRACTICE FOR SALE

INTERNAL MEDICINE: Internist in practice for over 30 years with subspecialty in gastrointestinal diseases. Equipment and active patient records. Address MRS. LEO T. BROWN, 1621 New Hampshire Avenue, N.W., Washington D. C. 20009 or telephone Dupont 7-7722.

REAL ESTATE

FOR SALE: Doctor's combined home-office, large corner lot, Northwest Washington. Office wing, over 1300 sq. ft., includes reception room, consultation room, nurse's area, 5 treatment rooms, X-ray room, laboratory, bath; separate entrance. Custom-built stone and brick rambler, air-conditioned. Detached 2-car garage. Address Box 58, 2007 Eye Street, N.W., Washington, D.C. 20006.

OFFICE SPACE AVAILABLE

FOR RENT: Office space ideally located at corner of 5500 Colorado Avenue, N.W. Approximately 1,200 sq. ft., newly remodeled, divided into 3 offices with each containing reception room, office, consultation and examining rooms. Air-conditioned. Reasonable rent. Telephone MR. FRANK BUAS, Randolph 3-6000.

FOR RENT: Only a few desirable offices remaining for physicians or dentists at SEVEN CORNERS MEDICAL CENTER in Virginia. More than 50 physicians and dentists presently occupy these attractive suites in this fast-growing area. All services included in rental. Telephone 534-1100.

FOR RENT: About 1500 sq. ft. office space, with apartment, on Capitol Hill, 2 blocks from Supreme Court, Senate Offices and Library of Congress. High income area. Will remodel to suit. For evening appointment telephone owner, 589-2681.

FOR RENT: 1732 Eye Street, N.W.: entire third floor of 4-story elevator building, approx. 1500 sq. ft. Available for lease at less than $4 sq. ft. All utilities and services included in rental. Immediate occupancy. Telephone CARL G. ROSINSKI Co., National 8-9254.

FOR LEASE: Offices at 1901 16th Street, N.W.; excellent location, remodeled building. Corner suite, front, off lobby, well lighted, 2 exits; 3½ rooms, hall, bath, kitchenette. Will decorate. Available March 1. One year lease, $225 month. Write MR. SAMUEL O'BRYANT, 1603 16th Street, N.W. (20009) or telephone Columbia 5-3369.

FOR RENT: Office space, approx. 750 sq. ft., available immediately in NEW DOCTORS BUILDING, 1712 Eye Street, N.W. Telephone 298-7055, MR.SMITH or MRS. BRITO.

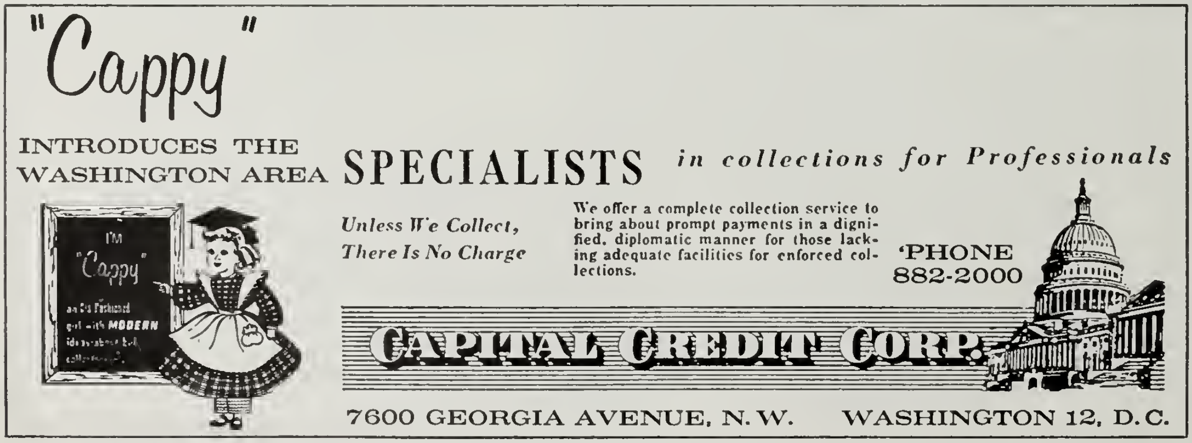
FOR RENT OR SALE: Offices in medical building, vicinity Farragut Square, consisting of reception room, business office, 2 consultation rooms, all large; 6 examining rooms; laboratory, 1500 sq. ft. Will accommodate 2 or 3 doctors. Rental $350 month. Utilities not included. Telephone Woodley 6-0696.

FOR RENT: New DUPONT MEDICAL BUILDING, exclusively medical offices; prime location, 1234 19th Street, N.W.; $3.85 sq. ft. plus share of operating cost. Rent includes all utilities, char service, heat, air-conditioning, automatic elevators. Parking available. Telephone Republic 7-3313.

TO SHARE: Large, equipped private office, with parking facilities, in choice D. C. location. Reasonable rent. Telephone Decatur 2-7641.

TO SHARE: Completely furnished offices, on first floor, in Langley Park, Md. Telephone 779–1700.

TO SHARE: Otolaryngologist will share completely furnished office (600 sq. ft.) in Silver Spring, Md. Telephone 588-0011.



"Cappy"

INTRODUCES THE WASHINGTON AREA SPECIALISTS *in collections for Professionals*

Unless We Collect, There Is No Charge

We offer a complete collection service to bring about prompt payments in a dignified, diplomatic manner for those lacking adequate facilities for enforced collections.

'PHONE 882-2000

CAPITAL CREDIT CORP.

7600 GEORGIA AVENUE, N. W. WASHINGTON 12, D.C.

Classified Advertisements (*Continued*)

TO SHARE: Surgeon in Eye Street medical building wishes to share office; separate consultation room. Address Box 43, 2007 Eye Street, N.W., Washington, D.C. 20006.

FOR RENT: Corner office at Eighth and East Capitol Streets, N.E.; private entrance; will remodel to suit tenant (physician only). Beautiful apartment on second floor, all newly renovated. For further information telephone COLONEL J. SIDNEY WOLF, Appleton 7-7418.

TO SHARE: Internist will share suite (875 sq. ft.) and facilities designed for 2 specialists in new, downtown medical office building. For further information telephone 298-6520.

TO SHARE: Internist in Silver Spring, Md. will share office space (850 sq. ft.) consisting of 3 examining rooms, consultation room, ECG room, laboratory. For information telephone 587-3535.

FOR RENT: Excellent physicians' suites in MONTGOMERY HOUSE, 4401 East-West Highway. Choice suburban location, 2 blocks to center of Bethesda. Ample parking. Modern, air-conditioned building. Area newly zoned for professional use. Modest rentals, $240 and $306.50 per month. Telephone 652-6829 or Mr. Amatulli, H. G. SMITHY Co., Sterling 3-3300.

FOR RENT: Office space in NEW MEDICAL BUILDING at 1726 Eye Street, N.W. All utilities included plus switchboard service. Central air-conditioning. Parking available. Telephone 298-6936.

FOR RENT: Medical suite, partitioned; 800 sq. ft. available (can be reduced to 600). All utilities, including air-conditioning; private toilet. For complete information address MANAGER, 1800 EYE STREET MEDICAL BUILDING, or telephone Republic 7-4777.

EQUIPMENT FOR SALE

NEW LABORATORY, fully equipped, suitable for hematology, blood chemistries and urine examinations. Finest equipment made. Prefer to sell as a whole but would consider piecemeal sale. Telephone Hobart 2-1113.

VASOSCILLATING BED (Sander's) for peripheral vascular diseases. Telephone Executive 3-5423.

PHYSICIANS' PLACEMENT SERVICE

THE MEDICAL SOCIETY'S **Physicians' Placement Committee** maintains a service to benefit its members and other physicians by locating suitable openings, assistants or associates. It will also assist Government agencies and industrial organizations to secure physicians for their Medical Departments. Call Di 7-3111—ask for Mr. Trust.

"Registered Nurses—For Private Duty"

U. S. EMPLOYMENT SERVICE

PROFESSIONAL OFFICE

GRADUATE NURSES REGISTRY

SOLAR BUILDING
1000 16th St., N.W.—Room 705
WASHINGTON, D. C. 20212

CALL—DISTRICT 7-1129

24-hour telephone service—
7 days a week

NURSES REGISTRY

EXPERIENCED UNDERGRADUATE
& PRACTICAL NURSES

Recommended by Physicians
At Your Service for Day or Night Duty
in Washington and nearby area

CALL—RAndolph 6-6706

VISIT THESE
CONVENIENT RESIDENTIAL
COMMUNITIES FOR EXECUTIVES
AND PROFESSIONALS

built and sold by Gruver & Cooley
area builders for over 50 years

in Maryland:

Walnut Woods . . . take 70-S to Montrose Rd., right one block to Hitching Post Lane, right to Old Stage Rd., then right on Old Stage. Priced from $45,000.

Luxmanor . . . Take Old Georgetown Rd. north from 70-S for two blocks to New Lux Lane, turn left and follow the Luxmanor sign to Stephalee Lane. Priced from $58,000.

in Virginia:

Greenway Heights . . . from Beltway Exit 13 take Route 193 West for 2 miles to entrance on left, across from Madeira School. Priced from $52,000.

all open daily until dark

Gruver & Cooley
BUILDERS

5301 Wisconsin Ave., N.W. KE 7-1120
evenings and weekends call Mr. Stoner, EM 5-0867

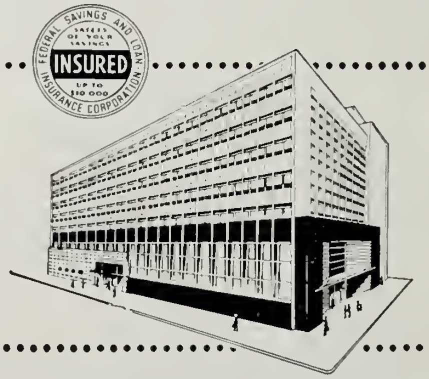
PERPETUAL . . . a place they'll remember

Visitors to our Nation's Capital from across the ocean—and across the country—take home a lasting impression of Washington's famous "Monument to Thrift"... Perpetual Building Association! It's not because of the magnificent block long structure on E Street N.W. from 11th to 12th (although it is on the list of the Government's suggested business tours) but of the *idea* that built it. Perpetual now has over 180,000 customers, and, being a *mutual* institution, each shareholder owns a *part* of the association. Their pride in such ownership is reflected in their loyalty. Yes, its a great place to visit...and an even greater place to save money!

PERPETUAL
BUILDING ASSOCIATION

EDWARD C. BALTZ, *President*
MAIN OFFICE: 11TH AND E STREETS NORTHWEST
"A Savings Institution . . . Dedicated to Thrift"
RESOURCES: $500,000,000.00

FEDERAL SAVINGS AND LOAN INSURANCE CORPORATION
SAFETY OF YOUR SAVINGS
INSURED
UP TO $10,000



INDEX OF ADVERTISERS

These Advertisers Support Your Journal.
Please Give Them Your Support.

Page

Bank
- Riggs National Bank ... 4

Beverages
- Coca-Cola Company ... 24
- Sealtest Foods ... 38

Building & Loan Associations
- National Permanent Savings & Loan Association ... 18
- Perpetual Building Association ... 46

Business Counseling
- Professional Business Management ... T-114

Collection Agencies
- Capital Credit Corporation ... 44
- Credit Bureau ... 5

Diagnostic Equipment
- Sanborn Division of Hewlett-Packard ... T-84

Dietetic Foods
- National Dairy Council ... 37

Equipment & Supplies
- Accredited Surgical Sales ... 43
- Beuchler's, Inc. ... T-99
- Gibson Company ... 43
- Jobst Institute, Inc. ... 24
- Nelson Kloman Surgical Supply Company ... 43

Funeral Home
- S. H. Hines & Company ... 11

Insurance
- Mutual of Omaha ... 3-C
- Russell, Marsh & Kennedy, Inc. ... 6

Investment Planning
- Ferris & Company ... 27

Nurse Registries
- Association of Undergraduate and Practical Nurses Registry ... 45
- Capital Nurse Registry ... 43
- U. S. Employment Service for D. C. ... 45

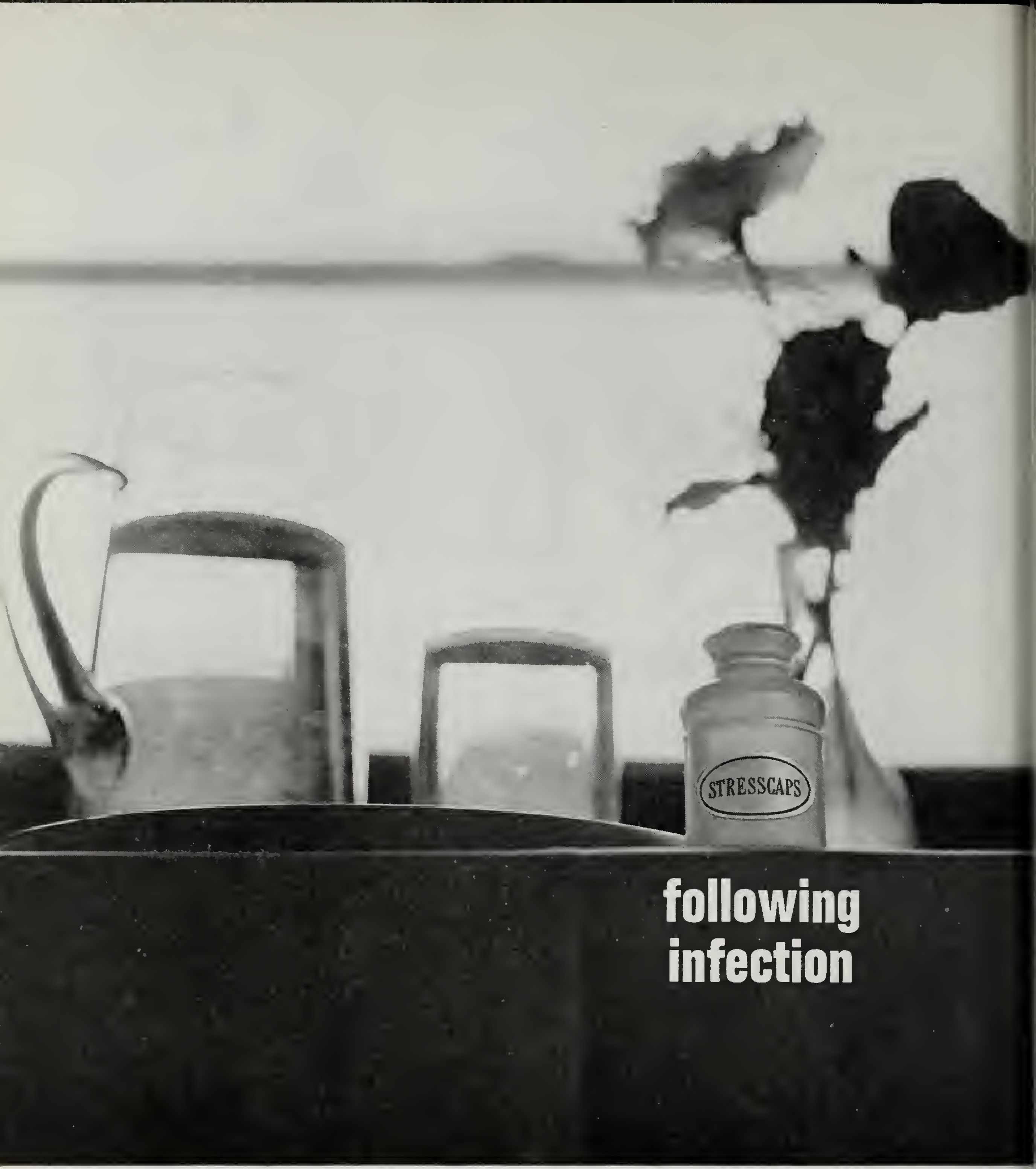
Office Space
- Georgetown Doctors Park ... 7
- Gruver & Cooley ... 45
- Pomponio Properties, Inc. ... T-88
- Regency House ... 43
- Shannon & Luchs ... T-98

Pharmaceuticals
- Abbott Laboratories ... 39–42
- Ames Company ... 12
- Bristol Laboratories ... T-86-87
- Burroughs Wellcome & Company ... 17
- Burton, Parsons and Company ... 22
- Hynson, Westcott & Dunning, Inc. ... 3
- Lakeside Laboratories, Inc. ... T-103, 105, 107, 109, 111, 113; 33, 35
- Lederle Laboratories ... 30, 48
- Eli Lilly & Company ... 32
- Parke Davis & Company ... 2-C
- Pfizer Laboratories ... 8–10
- Wm. P. Poythress & Company ... 16
- A. H. Robins Company ... 19–21
- Roche Laboratories ... 4-C
- J. B. Roerig and Company ... 28
- G. D. Searle & Company ... T-78-79
- Smith, Kline & French Laboratories ... 29
- Wallace Laboratories ... 14–15, 26
- Winthrop Laboratories ... 13

Pharmacies
- Higger's Drugs ... T-82
- Maxwell & Tennyson ... 38
- Peoples Drug Stores ... 31

Sanitariums
- Kalorama Convalescent Home ... 27
- Kensington Gardens Nursing Home ... 23
- Magnolia Gardens Nursing Home ... 27

T–text



STRESSCAPS B and C vitamins in therapeutic amounts...help the body mobilize defenses during convalescence...aid response to primary therapy. The patient with a severe infection, and many others undergoing physiologic stress, may benefit from STRESSCAPS.

STRESSCAPS®

FOR PROFESSIONAL RECOMMENDATION ONLY

Stress Formula Vitamins Lederle

Each capsule contains:

Vitamin B_1 (as Thiamine Mononitrate)	10 mg.
Vitamin B_2 (Riboflavin)	10 mg.
Niacinamide	100 mg.
Vitamin C (Ascorbic Acid)	300 mg.
Vitamin B_6 (Pyridoxine HCl)	2 mg.
Vitamin B_{12} Crystalline	4 mcgm.
Calcium Pantothenate	20 mg.

Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 (one month's supply) and 100 (three months' supply).

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY Pearl River, N.Y.
8693-4

Lederle

ATTENTION!

All members of the Medical Society of the District of Columbia who are *now insured* under the official income protection insurance program!

The Administrator of your plan, in keeping with the principle of providing the best coverage available to members of the medical profession, is pleased to announce that increased benefits are now available to eligible members*:

- **Increased weekly benefits**
- **Longer term of coverage for sickness**

You will be contacted shortly to provide you with details of these improved benefits and to advise you how they can be used to modernize your plan of income protection insurance.

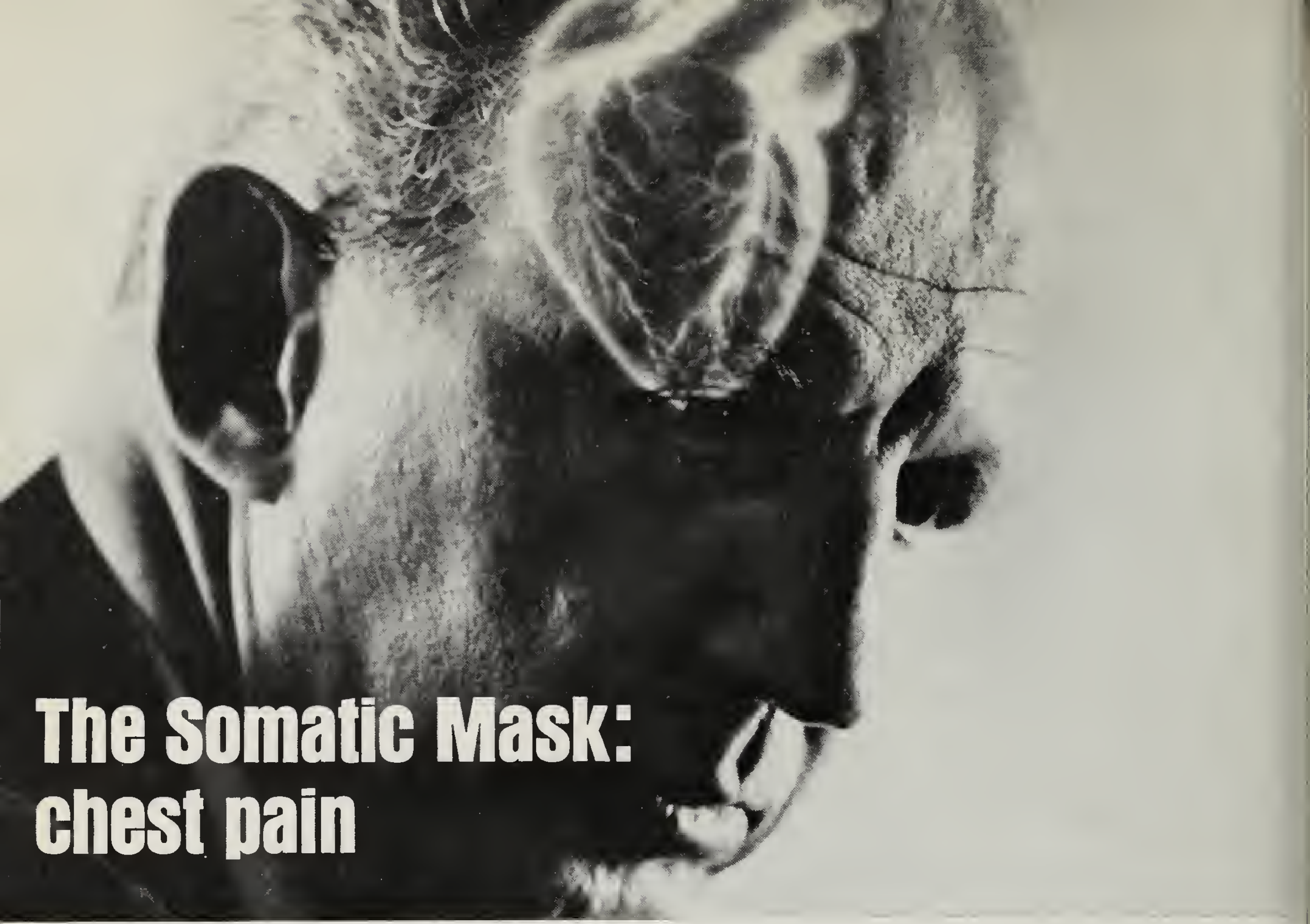
---

* This is an announcement only and does not contain any of the underwriting requirements for eligibility.

Joseph E. Jones, Administrator
1666 Connecticut Avenue, N.W.
Washington, D. C. 20009
Tel. 483-3100

Mutual
OF OMAHA

MUTUAL OF OMAHA INSURANCE COMPANY
Life Insurance Affiliate: United of Omaha
Home Office: Omaha, Nebraska



heart disease or psychic tension?

"Heart symptoms"—chest pain, tachycardia, arrhythmia—invariably alarm and preoccupy the patient, though they may be completely without organic basis. Such symptoms often are somatic masks of psychic tension, arising from constant encounters with stressful situations.

When the problem is diagnosed as emotionally produced, consider Valium (diazepam) as adjunctive therapy. Valium (diazepam) acts rapidly to calm the patient, to reduce his psychic tension and relieve associated cardiovascular complaints.

Neurotic fatigue—the chronic tiredness resulting from emotional strain which so often accompanies psychogenic "heart" symptoms—also can be controlled by this highly useful agent. Valium (diazepam) often achieves results where other psychotherapeutic agents have failed.

Valium (diazepam) is generally well tolerated, and usually does not impair mental acuity or ability to function. If side effects such as ataxia and drowsiness occur, they usually disappear with dosage adjustment.

Valium®(diazepam)

2-mg, 5-mg, 10-mg tablets

In prescribing: Dosage — Adults: Mild to moderate psychoneurotic reactions, 2 to 5 mg b.i.d. or t.i.d.; severe psychoneurotic reactions, 5 to 10 mg t.i.d. or q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hrs, then 5 mg t.i.d. or q.i.d. as needed; muscle spasm with cerebral palsy or athetosis, 2 to 10 mg t.i.d. or q.i.d. Geriatric patients: 1 or 2 mg/day initially, increase gradually as needed.

Contraindications: Infants, patients with history of convulsive disorders or glaucoma.

Warning: Not of value in the treatment of psychotic patients, and should not be employed in lieu of appropriate treatment.

Precautions: Limit dosage to smallest effective amount in elderly patients (not more than 1 mg, one or two times daily) to preclude ataxia or oversedation. Advise patients against possibly hazardous procedures until correct maintenance dosage is established; driving during therapy not recommended. In general, concurrent use with other psychotropic agents is not recommended. Warn patients of possible combined effects with alcohol. Safe use in pregnancy not established. Observe usual precautions in impaired renal or hepatic function and in patients who may be suicidal; periodic blood counts and liver function tests advisable in long-term use. Cease therapy gradually.

Side Effects: Side effects (usually dose-related) are fatigue, drowsiness and ataxia. Also reported: mild nausea, dizziness, blurred vision, diplopia, headache, incontinence, slurred speech, tremor and skin rash; paradoxical reactions (excitement, depression, stimulation, sleep disturbances and hallucinations) and changes in EEG patterns. Abrupt cessation after prolonged overdosage may produce withdrawal symptoms similar to those seen with barbiturates, meprobamate and chlordiazepoxide HCl.

Supplied: Tablets, 2 mg, 5 mg and 10 mg; bottles of 50 for convenience and economy in prescribing.

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

ROCHE

OPY 1

MEDICAL ANNALS of the DISTRICT OF COLUMBIA

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON

March, 1966 Vol. XXXV · No. 3

Regeneration of Liver
E. H. Bremer, M.D., J. Bacos, M.D., G. Augustin, M.D. and D. Sabatini, M.D.

Status of Stereotaxic Surgery
A. J. Luessenhop, M.D., J. L. Fox, M.D., and R. Kachmann, M.D.

Myxedema with Pericardial Effusion
Arthur Burgerman, M.D.

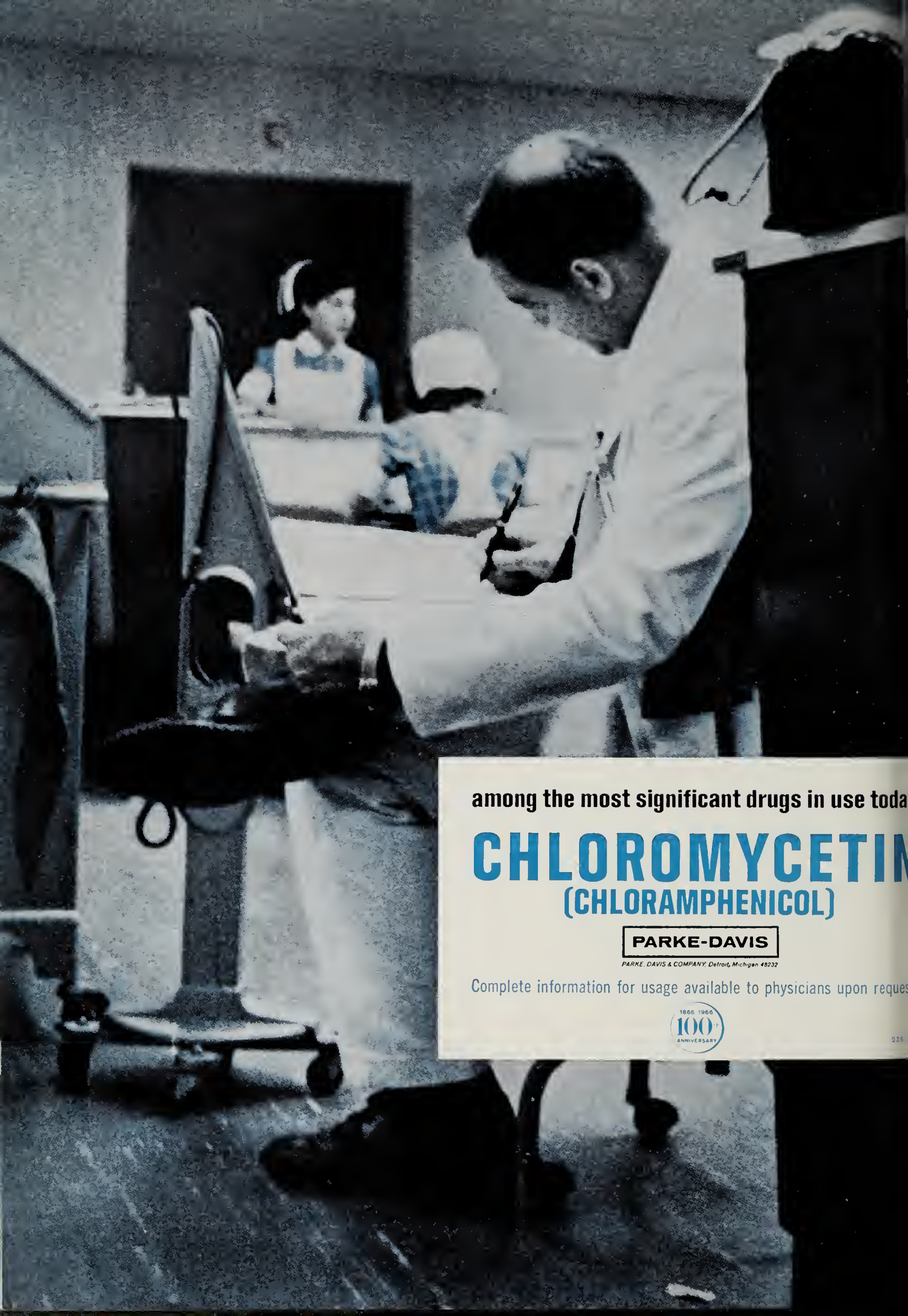
Hyposensitization and Allergic Patient
Raymond T. Benack, M.D.

Medical Research and Education
Harold Stevens, M.D.

(Complete Index on page 5)

THE MEDICAL SOCIETY OF
THE DISTRICT OF COLUMBIA
2007 Eye Street Northwest

DISPLAY
SHELVES



among the most significant drugs in use toda

CHLOROMYCETI
(CHLORAMPHENICOL)

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit, Michigan 48232

Complete information for usage available to physicians upon reques

1866 1966
100+
ANNIVERSARY

926

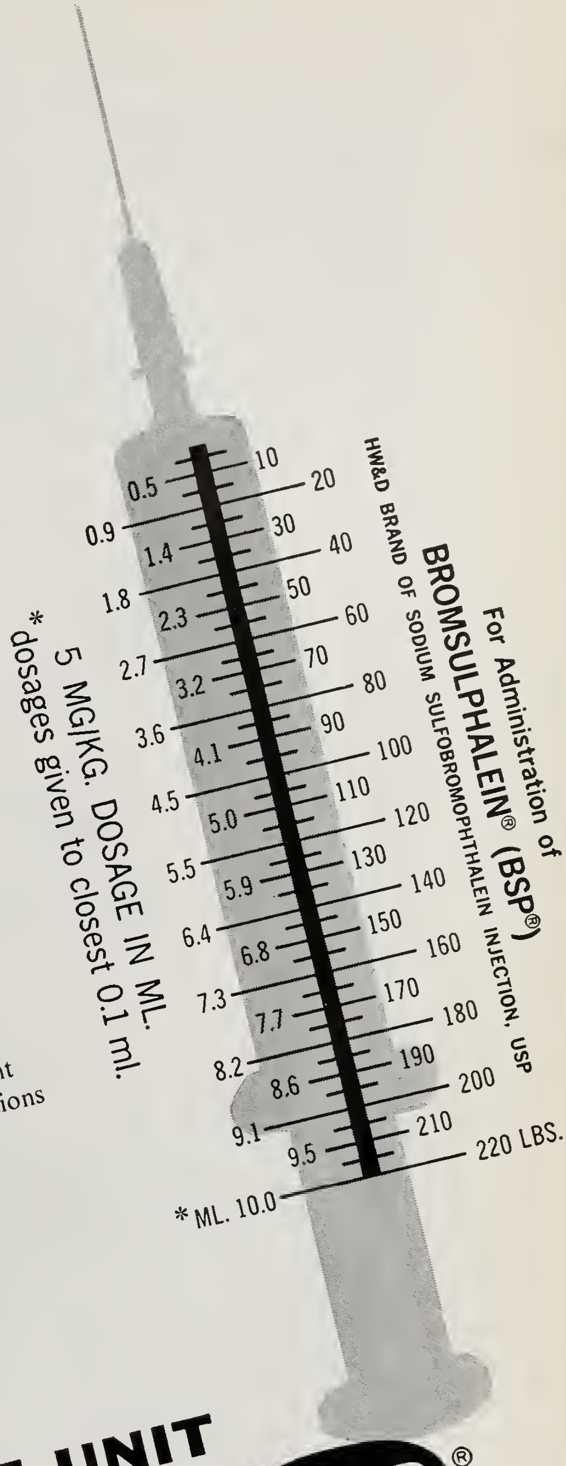
® DISPOSABLE UNIT
P® DISPOSABLE UNIT
P® DISPOSABLE UNIT
P® DISPOSABLE UNIT
SP® DISPOSABLE UNIT
SP® DISPOSABLE UNIT
SP® DISPOSABLE UNIT
BSP® DISPOSABLE UNIT
BSP® DISPOSABLE UNIT
BSP® DISPOSABLE UNIT

A RELIABLE, PROVEN PRODUCT . . .
The BSP test, introduced in 1925, remains one of the most sensitive laboratory procedures available for determining hepatic function.

A STERILE, CONVENIENT PUT-UP . . .
Each BSP Disposable Unit contains: a sterile, glass, disposable syringe with the 5 mg./kg. BSP dosage schedule imprinted on the barrel, a sterile needle, alcohol swab and a 7.5 ml. or 10 ml. size ampule of Bromsulphalein.

The BSP unit is designed for maximum patient protection. The precalibrated syringe makes weight calculations unnecessary and provides for proper dosage regardless of patient-weight.

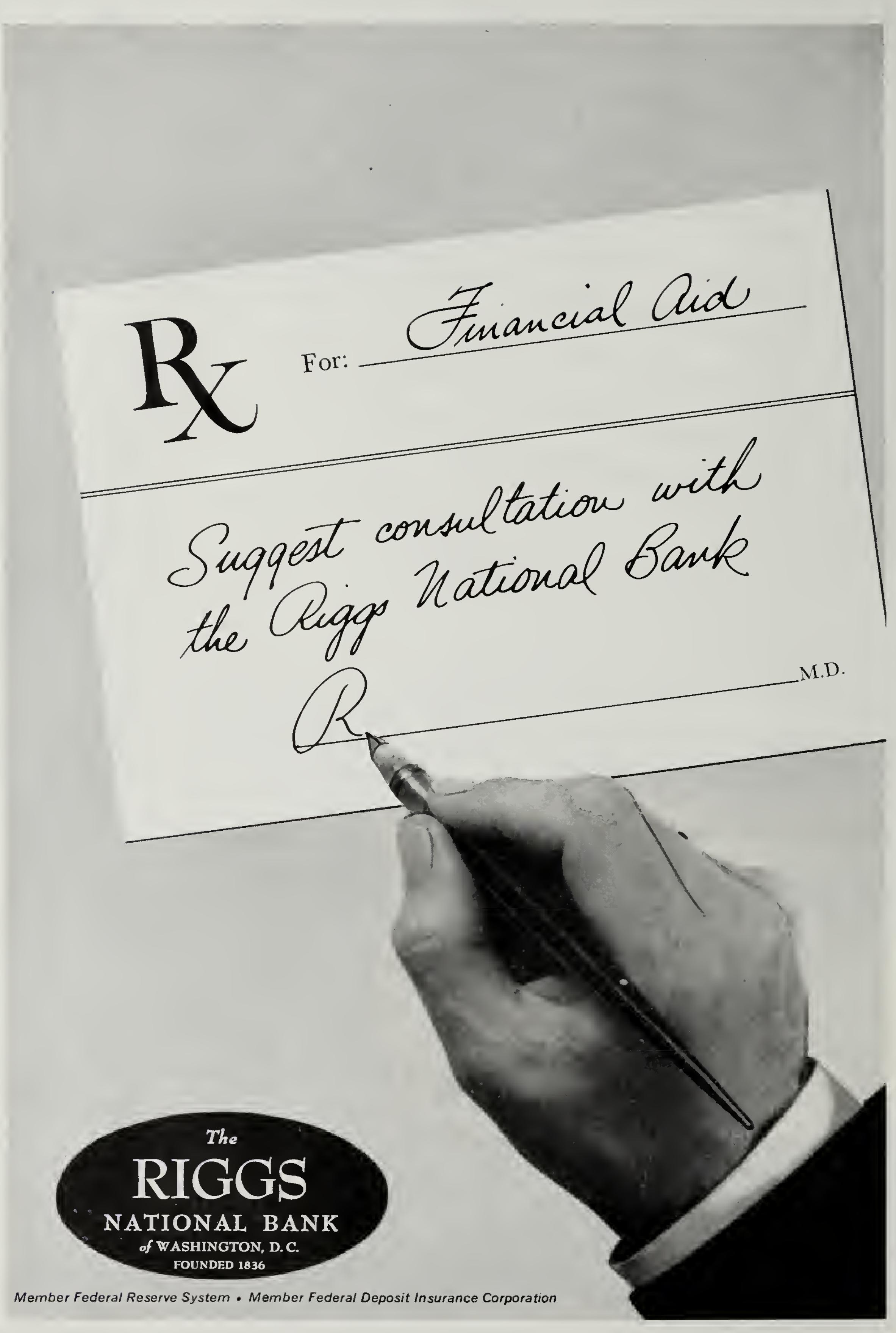
ECONOMICALLY PACKAGED . . .
Prepared for economic unit dispensing, this completely disposable put-up affords a savings in time and labor—the most costly commodities.


For Administration of
BROMSULPHALEIN® (BSP®)
HW&D BRAND OF SODIUM SULFOBROMOPHTHALEIN INJECTION, USP
5 MG/KG. DOSAGE IN ML.
*dosages given to closest 0.1 ml.
0.5
0.9
1.4
1.8
2.3
2.7
3.2
3.6
4.1
4.5
5.0
5.5
5.9
6.4
6.8
7.3
7.7
8.2
8.6
9.1
9.5
* ML. 10.0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200
210
220 LBS.

BSP®

BSP® DISPOSABLE UNIT
HW&D BRAND OF SODIUM SULFOBROMOPHTHALEIN INJECTION, USP
(50 mg. per ml.)

HYNSON, WESTCOTT & DUNNING, INC.
BALTIMORE, MARYLAND 21201
(BSPO2)
HW&D



Rx For: Financial Aid

Suggest consultation with the Riggs National Bank

R M.D.

The
RIGGS
NATIONAL BANK
of WASHINGTON, D.C.
FOUNDED 1836

Member Federal Reserve System • Member Federal Deposit Insurance Corporation

MEDICAL ANNALS
of the District of Columbia

EDITORIAL OFFICE:
2007 Eye Street, N.W., Washington, D.C. 20006
Telephone 223-2230

Copyright ©, 1966
by The Medical Society
of the District of Columbia

Yearly Subscription, $5.00
Single Number, 50¢

Second-class postage paid at Baltimore, Md.
Published monthly at
Mount Royal and Guilford Avenues,
Baltimore, Maryland 21202

Contents for March

SCIENTIFIC ARTICLES

Regeneration of the Liver after Major Hepatic Resection with an Illustrative Case. *Ernst H. Bremer, M.D., James Bacos, M.D., Gunter Augustin, M.D., and Domenic Sabatini, M.D.*, Washington 115

The Status of Stereotaxic Surgery for Movement Disorders and Intractable Pain. *Alfred J. Leussenhop, M.D., John L. Fox, M.D., and Rudolf Kachmann, M.D.*, Washington 120

Myxedema with Pericardial Effusion. *Arthur Burgerman, M.D., F.A.C.P.*, Washington 126

Hyposensitization and the Allergic Patient. *Raymond T. Benack, M.D.*, Wheaton, Md. 134

Medical Research and Education—Matrix and Metamorphosis. *Harold Stevens, Ph.D., M.D.*, Washington 140

EDITORIALS

Medical Economics in a Changing World 148

Regulations to Curb Illicit Drug Traffic 149

The Morris Cafritz Memorial Hospital 150

(*Continued on page 6*)

ONLY ONE FIRM CAN PROVIDE ALL THESE SERVICES, OR ANY ONE OF THEM...

- A complete low-cost patient billing service
- Confidential information on every account
- An ethical and effective collection service
- A dignified pre-collection service
- Professional accounts receivable consultation

THE CREDIT BUREAU, INC.

FOUR OFFICES TO SERVE YOU LOCALLY

Washington, D.C.; Rockville, Md.; Fairfax, Va.; Alexandria, Va.

3,000 CLOSELY ASSOCIATED AGENCIES THROUGHOUT THE COUNTRY

Call Now to Arrange an Appointment with Our Representative

Ed Garretson NAtional 8-0680

Contents for March

(Continued)

SPECIAL ARTICLE

Experiences of a Volunteer Internist in South Vietnam. *Fred A. J. Geier, M.D., F.A.C.P.*, Washington 151

MISCELLANY

Letters to the Editor: DOCPAC Needs Members 144
President's Page: Dedication Ceremonies 145
Health Dept. Notes: Fatal Accidents in D. C. *Murray Grant, M.D., D.PH.*, Washington 155
Use of the Hospital Emergency Room: A Policy Statement of the Medical Society of the District of Columbia 156
News and Personals 161
Woman's Auxiliary Notes: Report of Committee on Mental Health. *Mrs. Charles V. Pate*, Washington 170
Obituaries 170
Officers and Personnel of Boards and Committees for 1966 175
Officers of Sections of the Medical Society 179
National and Regional Meetings 180
Books Received *Adv. 18*
Medical Annals Staff and Officers of Medical Society *Adv. 25*
Book Reviews *Adv. 34*
Classified Advertisements *Adv. 46*
Index of Advertisers *Adv. 49*

INSURANCE FOR THE DOCTOR

***PROFESSIONAL LIABILITY**
OFFICE PUBLIC LIABILITY
LOW COST TERM LIFE INSURANCE

and

EMPLOYEES WORKMEN'S COMPENSATION
EQUIPMENT FLOATER
FIRE INSURANCE CONTENTS
BUSINESS EXPENSE DISABILITY
BONDS ON EMPLOYEES

AUTOMOBILE INSURANCE
ANNUITIES—FIXED & VARIABLE
NON-CAN DISABILITY INCOME
PENSION PLANS FOR DOCTORS
PENSION PLANS FOR EMPLOYEES

$1,000,000 CATASTROPHE LIABILITY

*endorsed by the Medical Society of the District of Columbia

Russell, Marsh & Kennedy, Inc.

WILLIAM G. RUSSELL
President

5151 Wisconsin Ave., N.W.
Telephone: 244-7600

one mid-morning

one mid-evening

New 300 mg tablet It's made for b.i.d.

For Adults–2 tablets provide a full 24 hours of therapy...with all the extra benefits of DECLOMYCIN...lower mg intake per day...proven potency... 1-2 days' "extra" activity to protect against relapse or secondary infection.

DECLOMYCIN®
DEMETHYLCHLORTETRACYCLINE
300mg FILM COATED TABLETS

Effective in a wide range of everyday infections—respiratory, urinary tract and others—in the young and aged—the acutely or chronically ill—when the offending organisms are tetracycline-sensitive.
Warning — In renal impairment, usual doses may lead to excessive systemic accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of discomfort.
Precautions and Side Effects — Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. Use of demethylchlortetracycline during tooth development (last trimester of pregnancy, neonatal period and early childhood) may cause discoloration of the teeth (yellow-grey-brownish). This effect occurs mostly during long-term use but has also been observed in short treatment courses. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment. Side reactions include glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis and dermatitis. If adverse reaction or idiosyncracy occurs, discontinue medication and institute appropriate therapy. Anaphylactoid reactions have been reported.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products.
Capsules: 150 mg of demethylchlortetracycline HCl.

Tablets: film coated, 300 mg, 150 mg, and 75 mg of demethylchlortetracycline HCl.

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York

Lederle

674-6—3838

new from Ames
5 basic uro-analytical facts in 30 seconds

Labstix®
BRAND REAGENT STRIPS

...broadest urine screening possible from a single reagent strip

Urine test results with Labstix Reagent Strips can represent significant guides to differential diagnosis or therapy in many conditions. An unexpected "positive" may enable you to detect hidden pathology—long before more recognizable symptoms become evident. Negative results, which permit you to rule out abnormalities in a broad clinical range, can serve as baseline values for reference in future examinations. The 5 colorimetric test areas encompassed on Labstix Reagent Strips are:

pH—values are read numerically in the essential range of pH 5 to pH 9.

Protein—results are read either in the "plus" system or in mg. % in amounts approximating "trace," 30, 100, 300, and over 1000 mg. %.

Glucose—provides a "Yes-or-No" answer for urine "sugar spill."

Ketones—detects ketone bodies in urine—**both** acetoacetic acid and acetone. Reacts with as little as 5 to 10 mg. % of acetoacetic acid.

Occult Blood—specific test for intact red cells, hemoglobin or myoglobin. Results are read as negative, small, moderate or large amounts.

Now a Clear Reagent Strip of Firm Construction

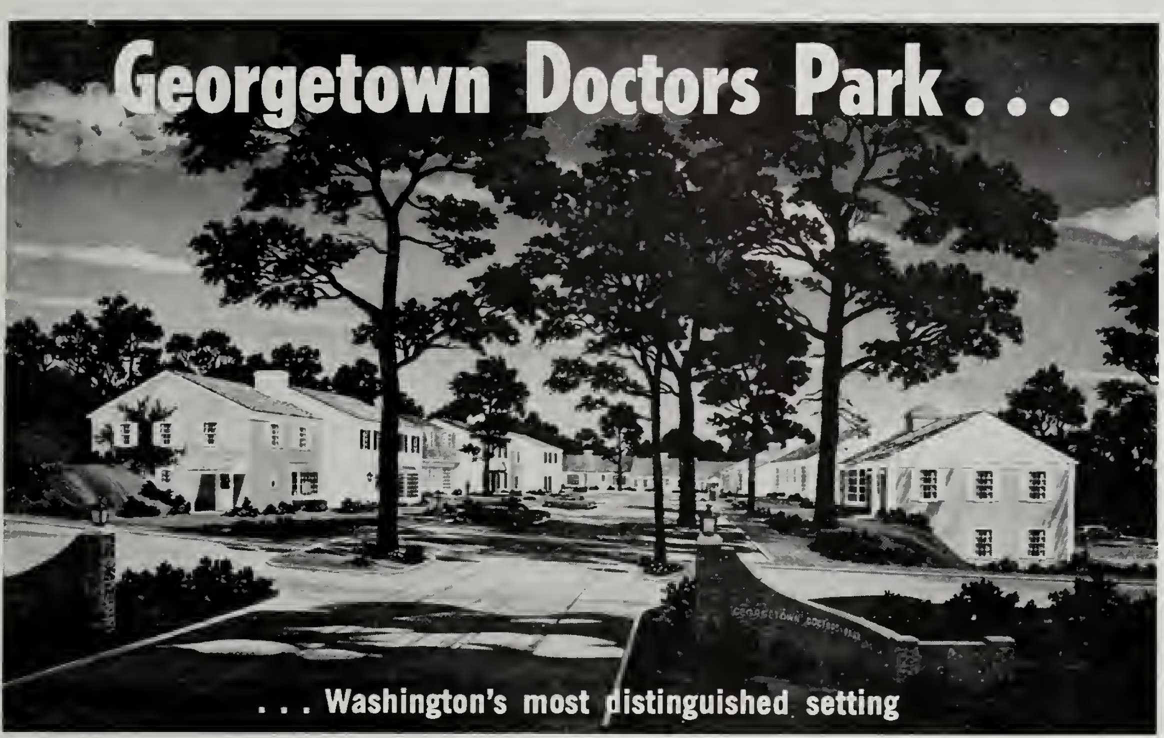
...facilitates handling during testing procedure. Excellent color contrast made possible by the clear plastic strip, together with the clearly defined color charts provided, permits precise, reproducible colorimetric readings in all 5 test areas. A more definitive interpretation of uro-analytical facts is made possible.

Available: Labstix Reagent Strips, bottles of 100 (color charts are supplied with each bottle).

Ames Company, Inc., Elkhart, Indiana

AMES

08165


Georgetown Doctors Park . . .
. . . Washington's most distinguished setting

Architect: Edward H. Noakes & Associates, A. I. A.

For the medical man who seeks a lifetime answer to the question of location, there's no better choice than Georgetown Doctors Park. The location is matchless—the advantages are immeasurable. Your professional suite would be in the midst of the great Bethesda medical and research complex, but also in the heart of Washington's loveliest and most distinguished residential area. Our architect, a specialist in medical design, has created the kind of restful and private atmosphere that both patients and staff appreciate. It fronts on the park of the National Institutes of Health, is two minutes from Suburban Hospital and, is less than a mile from the Capital Beltway and leading arterials in the northwest area. Interior office arrangements are flexible and can be designed for you by our consultants. Each suite features a private entrance and is adjacent to landscaped parking areas accommodating more than 300 automobiles. Soundproofing, air-conditioning, year-round climate control and expert maintenance are assured in these superb Georgian suites. Distinguished in appearance and unmatched in location is Georgetown Doctors Park.

Construction by:
Coakley and Williams
2301 Kansas Avenue
Silver Spring, Maryland

Rental Arrangements by:
John J. Grady Management, Inc.
516 Wheaton Plaza Building
Wheaton, Maryland
Telephone: 946-2070

Inspections at the site arranged at your convenience—call 946-2070

Georgetown Doctors Park ● 5401 West Cedar Lane ● Bethesda, Maryland

Butazolidin® alka

phenylbutazone	100 mg.
dried aluminum hydroxide gel	100 mg.
magnesium trisilicate	150 mg.
homatropine methylbromide	1.25 mg.

Usually works within 3 to 4 days in osteoarthritis

The trial period need not exceed 1 week. In contrast, the recommended trial period for indomethacin is *at least 1 month.*

That's why it's logical to start therapy with Butazolidin alka—you'll know quickly whether or not it works. And usually, it will.

A large number of investigators have reported major improvement in about 75% of cases. Some patients have gone into remission. Relief of stiffness and pain may be followed quickly by improved function and resolution of other signs of inflammation. And Butazolidin alka is well tolerated, especially since it contains antacids and an antispasmodic to minimize gastric upset.

Contraindications
Edema, danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when the patient is senile, or when other potent drugs are given concurrently. Large doses are contraindicated in patients with glaucoma.

Precautions
Obtain a detailed history and a complete physical and laboratory examination, including a blood count. The patient should be closely supervised and should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools. Make regular blood counts. Use greater care in the elderly.

Warning
If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy.

Adverse Reactions
The most common are nausea, edema and drug rash. Hemodilution may cause moderate fall in red cell count. The drug may reactivate a latent peptic ulcer. Infrequently, agranulocytosis, generalized allergic reaction, stomatitis, salivary gland enlargement, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported but cannot definitely be attributed to the drug. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hepatitis, jaundice, and several cases of anuria an hematuria. With long-term use, reversibl thyroid hyperplasia may occur infrequen

Dosage
The initial daily dosage in adults is 300-6 mg. daily in divided doses. In most instances, 400 mg. daily is sufficient. When improvement occurs, dosage should be creased to the minimum effective level: tl should not exceed 400 mg. daily, and is often achieved with only 100-200 mg. dai

Also available: Butazolidin®,
brand of phenylbutazone
Tablets of 100 mg.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York BU-38

Geigy

The discomforts of

DIARRHEA
MUCOUS COLITIS
DIVERTICULITIS
SPASTIC URETERITIS
BLADDER SPASM

. . . are relieved by direct musculotropic action with

Trocinate®

BRAND THIPHENAMIL HCl

Available in 100 milligram pink sugar-coated tablets.

The high therapeutic index permits dosage sufficient to relieve spasm promptly. The usual initial dose is 4 tablets. Maintenance dosage is usually one or two tablets 4 times a day.

Trocinate *BRAND* THIPHENAMIL HCl

BETA-DIETHYLAMINOETHYL DIPHENYLTHIOACETATE HYDROCHLORIDE

. . . directly relaxes smooth muscle spasm
. . . combats hypermotility
. . . non-mydriatic – may be used in glaucoma

Trocinate (Thiphenamil HCl) has been found in three clinical studies, (J. Mo. Med. Assoc., 48:685-6; Med. Rec. & Annals, 43:1104-6; J. Urol., 73:487-93), to be effective and to be free of side-effects. Fifteen years of wide clinical usage has affirmed the safety and effectiveness of Trocinate.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA
Manufacturers of ethical pharmaceuticals since 1856

the alcoholic...is overly anxious about his lack of any satisfaction. His job is joyless, and he resents supervision. He alienates his friends, then feels rejected. He fills his empty hours with drink.

Vistaril helps curb the craving for alcohol by relieving the underlying anxiety... because Vistaril calms smoothly, makes patients feel better without the euphoria or psychic dependence seen with some tranquilizers that foster habituation.

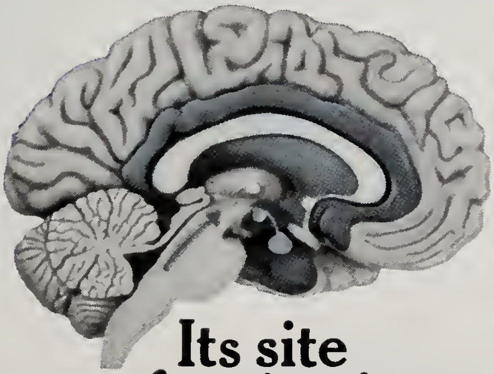
No other tranquilizer is as precise, as uncomplicated, as Vistaril®

(HYDROXYZINE)

What is Vistaril? Vistaril is hydroxyzine, a tranquilizer entity totally different from the diazepines, meprobamates and the phenothiazines. While equal to the diazepines and meprobamates in effectiveness, Vistaril has been associated with remarkably few of the unwanted psychic and somatic reactions seen with other tranquilizing agents because its primary effect is exerted at the seat of anxiety.

Vistaril tranquilizes with less complication than do the phenothiazines. Deleterious effects, such as hepatotoxicity, blood dyscrasias, skin pigmentation, and opacities of lens and cornea, are not characteristic of Vistaril activity.

Vistaril tranquilizes with less complication than do the diazepines and meprobamate. Withdrawal symptoms, possible psychotropic drug incompatibilities, blood dyscrasias and hepatotoxicity, reported with diazepines and meprobamate, are not characteristic of Vistaril.



Its site of action is the seat of anxiety

Pfizer Since 1849

Science for the world's well-being®

Turn page for brief summary...

The record of hydroxyzine experience:

Eight years of clinical effectiveness, over 1,000,000,000 doses prescribed, more than 500 published papers covering nearly 15,000 patients...

Contraindications: Hypersensitivity to hydroxyzine. The parenteral solution, for intramuscular or intravenous use, *must not* be injected subcutaneously or intra-arterially.

Precautions: Hydroxyzine may potentiate the action of central nervous system depressants. In conjunctive use, dosage for these drugs should be decreased. Because drowsiness may occur, patients should be cautioned against driving a car or operating dangerous machinery. The usual precautions for intramuscular injection should be followed; soft-tissue reactions have rarely been reported when proper technique has been used. On reported intravenous injection a few instances of digital gangrene have occurred distal to the injection site, considered to be due to inadvertent intra-arterial injection or periarterial extravasation. Therefore, particular caution should be observed to insure injection only into intact veins; avoid either intra-arterial injection or extravasation. Intravenous administration should be accomplished slowly, no faster than 25 mg. per minute, and not to exceed 100 mg. in any single dose.

Adverse Reactions: Drowsiness may occur; if so, it is usually transitory and may disappear in a few days of continued therapy or upon dosage reduction. Dryness of the mouth may be seen with higher doses. Involuntary motor activity has been reported in some hospitalized patients on higher than recommended dosage.

Supply: Vistaril (hydroxyzine pamoate) Capsules: 25 mg., 50 mg., 100 mg. Vistaril (hydroxyzine pamoate) Oral Suspension: 25 mg. per 5 cc. Vistaril (hydroxyzine HCl) Parenteral Solution: 25 mg./cc.—10-cc. vials, and 50 mg./cc.—2-cc. and 10-cc. vials.

More detailed professional information available on request.

The Vistaril site of action is the seat of anxiety

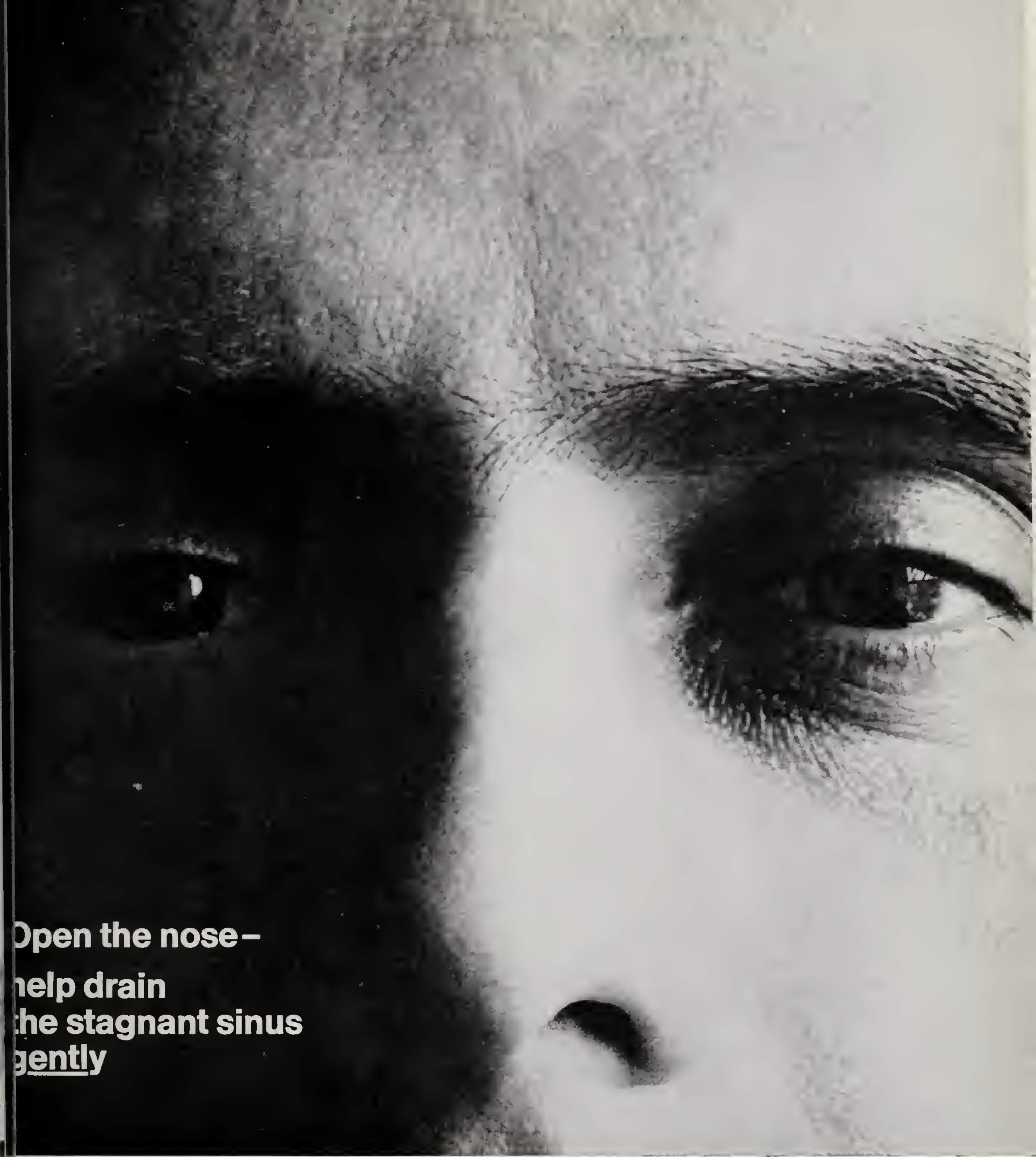
No other tranquilizer is as precise, as uncomplicated, as **Vistaril®** (HYDROXYZINE)

Science for the world's well-being®

Pfizer

Since 1849

PFIZER LABORATORIES
DIVISION, CHAS. PFIZER & CO., INC. NEW YORK, N.Y. 10017



eo-Synephrine is a standard among
pical vasoconstrictors. It is unsurpassed
r reducing nasal turgescence in colds;
nd a most valuable aid in preventing
nd treating sinusitis.

eo-Synephrine stops the boggy feeling of
olds at once—works against factors that
duce sinusitis. With Neo-Synephrine
ose drops, spray or jelly, turbinates shrink
n contact, obstructed ostia open and
rainage is re-established.

In sinusitis, Neo-Synephrine helps to promote drainage and hasten recovery.* Used promptly, it helps clear the stagnant sinus and lessen the chances of chronicity.

Neo-Synephrine HCl is available in:
- 1/8% solution for infants
- 1/4% solution for children and adults
- 1/4% pediatric nasal spray for children
- 1/2% solution for adults
- 1/2% nasal spray for adults
- 1/2% jelly for children and adults
- 1% solution for adults (resistant cases)

*Proctor, D. F.: The Nose, Paranasal Sinuses, and Ears in Childhood, Springfield, Ill., Charles C Thomas, 1963, p. 34.

Winthrop

Winthrop Laboratories, New York, N. Y. 10016

In colds and sinusitis
Neo-Synephrine® HCl
(brand of phenylephrine hydrochloride)
solutions/sprays/jelly

"All the Comforts of Home"..

for

POST OPERATIVE
MEDICAL
CONVALESCENT
DIABETIC
PARALYTIC
INVALID
AGED
CHRONIC
AMBULATORY
RETIRED
GUESTS, ETC.

AN ULTRA-MODERN HOME IN THE SUBURBS ON TEN ACRES WITH A COUNTRY ATMOSPHERE

KENSINGTON GARDENS SANITARIUM

★ A MEDICAL INSTITUTION UNDER THE SUPERVISION OF REGISTERED NURSES ★
LICENSED BY STATE AND COUNTY

3000 McComas Avenue Kensington, Maryland

- Rehabilitation Facilities
- Private and Semi-Private Rooms with Connecting Baths
- Beautifully Decorated
- Television in Spacious Lounges
- Large Porches
- Lovely Lawns and Shade Trees
- Supervised Diets
- Patients May Retain Their Own Physician
- 24-Hour Nursing Care
- Reasonable Rates
- Recreation and Physical Therapy

MEMBER OF

CARE OF THE AGED

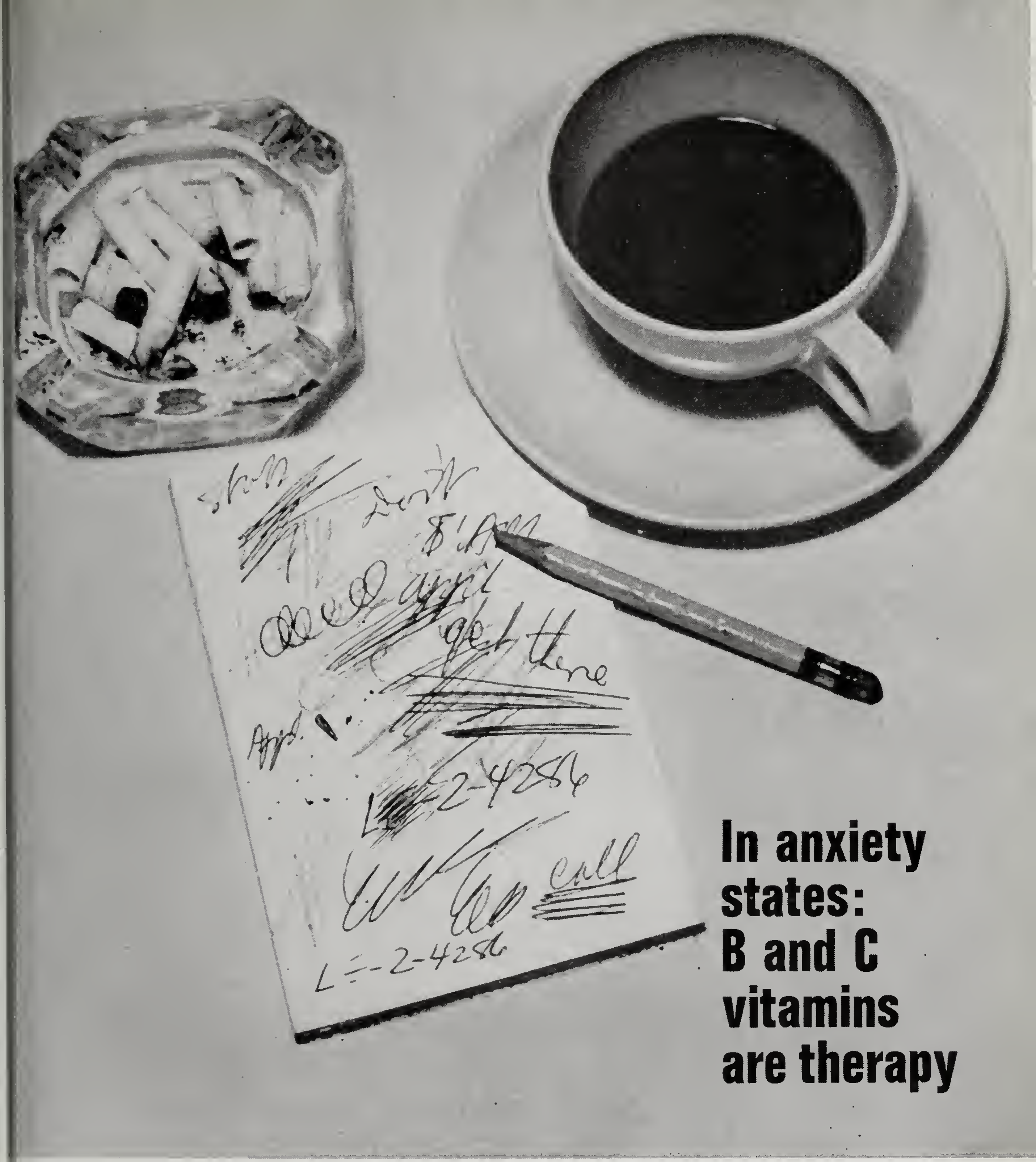
AMERICAN NURSING HOME ASSOCIATION

MEMBER
AND MARYLAND NURSING HOME ASSOCIATION
ACCREDITED BY THE NATIONAL COUNCIL
FOR THE ACCREDITATION OF NURSING HOMES

For Further Information Phone

933-0060 or 933-0872

Proprietors-Administrators
LILLIAN H. and
GEORGE L. BRICKER



Stress formula vitamins are an important supportive measure in main-aining the nutritional status of the emotionally disturbed patient. With STRESSCAPS, B and C vitamins are present in therapeutic amounts to meet ncreased metabolic demands. Patients with anxiety, and many others undergoing physiologic stress, may benefit from vitamin therapy with STRESSCAPS.

Each capsule contains:

Vitamin B_1 (as Thiamine Mononitrate)	10 mg.
Vitamin B_2 (Riboflavin)	10 mg.
Niacinamide	100 mg.
Vitamin C (Ascorbic Acid)	300 mg.
Vitamin B_6 (Pyridoxine HCl)	2 mg.
Vitamin B_{12} Crystalline	4 mcgm.
Calcium Pantothenate	20 mg.

Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

STRESSCAPS®

FOR PROFESSIONAL RECOMMENDATION ONLY

Stress Formula Vitamins Lederle

Lederle LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N. Y.

8241-4

BOOKS RECEIVED

Acknowledgment is made of the following books which have recently been received.

Nursing Education in Community Junior Colleges. A Four-State, 5-year Experience in the Development of Associate Degree Programs. BERNICE E. ANDERSON, ED. D. Pp. 319. Philadelphia: Lippincott, 1966.

Diagnosis and Therapy of the Glaucomas, 2nd ed. BERNARD BECKER, M.D., AND ROBERT N. SHAFFER, M.D., F.A.C.S. Price, $18.50. Pp. 443, with 228 illustrations and 5 plates in full color. St. Louis: Mosby, 1965.

Respiratory Care. H. H. BENDIXEN, L. G. EGBERT, J. HEDLEY-WHYTE, M. B. LAVER, AND H. PONTOPPIDAN. Price, $15.00. Pp. 252, illustrated. St. Louis: Mosby, 1965.

Radiologic Diagnosis in Infants and Children. ARMAND E. BRODEUR, M.D., M.RD., F.A.C.R. Price, $26.50. Pp., 503, with 757 illustrations. St. Louis: Mosby, 1965.

Vitreoretinal Pathology and Surgery in Retinal Detachment. PAUL A. CIBIS, M.D. Price, $20.00. Pp. 293, with 227 figures. St. Louis: Mosby, 1965.

Surgery of the Foot, 2nd ed. HENRI L. DUVRIES, B.S., D.S.C., M.D. Price, $17.50. Pp. 586, with 448 figures. St. Louis: Mosby, 1965.

Fifth National Cancer Conference Proceedings. Bellevue-Stratford Hotel, Philadelphia, Pennsylvania, September 17, 18 and 19, 1964. Sponsored by American Cancer Society, Inc. and National Cancer Institute. Pp. 764, illustrated. Philadelphia: Lippincott, 1965.

Controversy in Internal Medicine. Edited by FRANZ J. INGELFINGER, M.D., ARNOLD S. RELMAN, M.D., AND MAXWELL FINLAND, M.D. Price, $14.50. Pp. 679, illustrated. Philadelphia: Saunders, 1966.

Fundamentals of Clinical Hematology, 2nd ed. BYRD S. LEAVELL, M.D., AND OSCAR A. THORUP, JR., M.D. Price, $12.50. Pp. 597, with 87 figures. Philadelphia: Saunders, 1966.

Ferment in Medicine. A Study of the Essence of Medical Practice and of Its New Dilemmas. RICHARD M. MAGRAW, M.D. With a chapter on Automation in Medicine, written in collaboration with Daniel B. Magraw, M.B.A. Price, $6.50. Pp. 272. Philadelphia: Saunders, 1966.

New Drugs Evaluated by the A.M.A. Council on Drugs—1965. Price, $5.00. Pp. 516. Chicago: American Medical Association, 1965.

The Heart: Its Function in Health and Disease. ARTHUR SELZER, M.D. Price, $5.95. Pp. 301, with 30 illustrations. Berkeley, Calif.: University of California Press, 1966.

DEPROL®

meprobamate 400 mg. +
benactyzine hydrochloride 1 mg.

Indications: 'Deprol' is useful in the management of depression, both acute (reactive) and chronic. It is particularly useful in the less severe depressions and where the depression is accompanied by anxiety, insomnia, agitation, or rumination. It is also useful for management of depression and associated anxiety accompanying or related to organic illnesses.

Contraindications: Benactyzine hydrochloride is contraindicated in glaucoma. Previous allergic or idiosyncratic reactions to meprobamate contraindicate subsequent use.

Precautions: *Meprobamate*—Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of preexisting symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side effects: Side effects associated with recommended doses of 'Deprol' have been infrequent and usually easily controlled. These have included drowsiness and occasional dizziness, headache, infrequent skin rash, dryness of mouth, gastrointestinal symptoms, paresthesias, rare instances of syncope, and one case each of severe nervousness, loss of power of concentration, and withdrawal reaction (status epilepticus) after sudden discontinuation of excessive dosage.

Benactyzine hydrochloride—Benactyzine hydrochloride, particularly in high dosage, may produce dizziness, thought-blocking, a sense of depersonalization, aggravation of anxiety or disturbance of sleep patterns, and a subjective feeling of muscle relaxation, as well as anticholinergic effects such as blurred vision, dryness of mouth, or failure of visual accommodation. Other reported side effects have included gastric distress, allergic response, ataxia, and euphoria.

Meprobamate—Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Dosage: Usual starting dose, one tablet three or four times daily. May be increased gradually to six tablets daily and gradually reduced to maintenance levels upon establishment of relief. Doses above six tablets daily are not recommended even though higher doses have been used by some clinicians to control depression and in chronic psychotic patients.

Supplied: Light-pink, scored tablets, each containing meprobamate 400 mg. and benactyzine hydrochloride 1 mg.
Before prescribing, consult package circular.

WALLACE LABORATORIES / *Cranbury, N. J.*

CD-5726

FOR THE

DEPRESSION
INSOMNIA
TENSION
ANXIETY

COMPLEX

TRY DEPROL® meprobamate 400 mg. + benactyzine hydrochloride 1 mg.

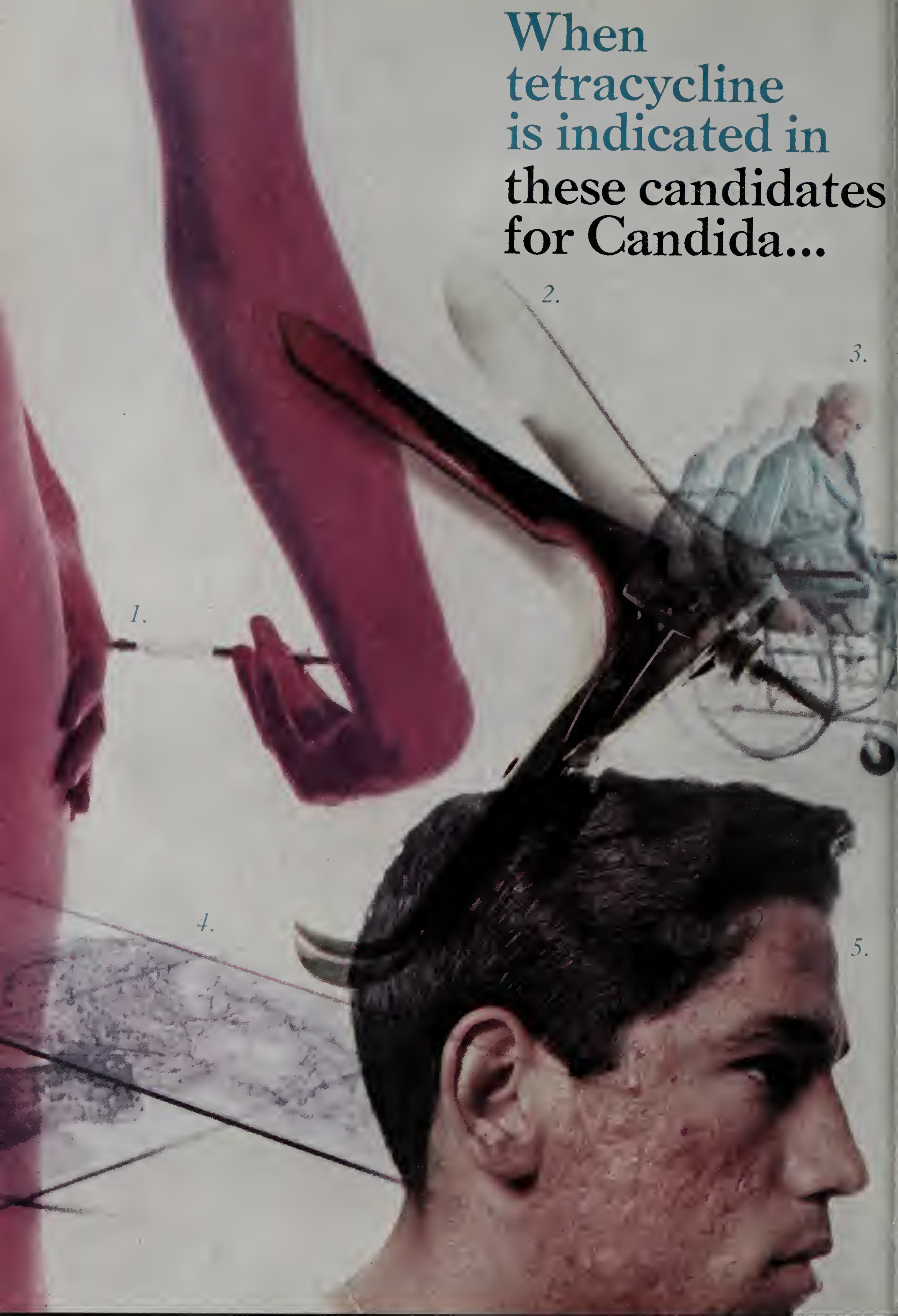
a logical first choice

FOR DEPRESSION

even when complicated by anxiety, tension, insomnia, agitation or rumination.

- Acts rapidly.
- Side effects at recommended dosage infrequent, usually easily controlled.

When tetracycline is indicated in these candidates for Candida...



New
low-cost
tetracycline/
antifungal
therapy

Tetrex®-F

tetracycline
phosphate complex
–nystatin

Because new Tetrex-F (tetracycline phosphate complex-nystatin) is the most economical therapy of its kind that you can prescribe, it is a sound choice whenever tetracycline therapy is indicated in patients predisposed to monilial infections.

Who are these "candidates for Candida"?

1. diabetic patients
2. nonpregnant women with a history of recent or recurrent monilial vaginitis
3. elderly or debilitated patients
4. patients with a past history of moniliasis
5. patients on long-term tetracycline or corticosteroid therapy.

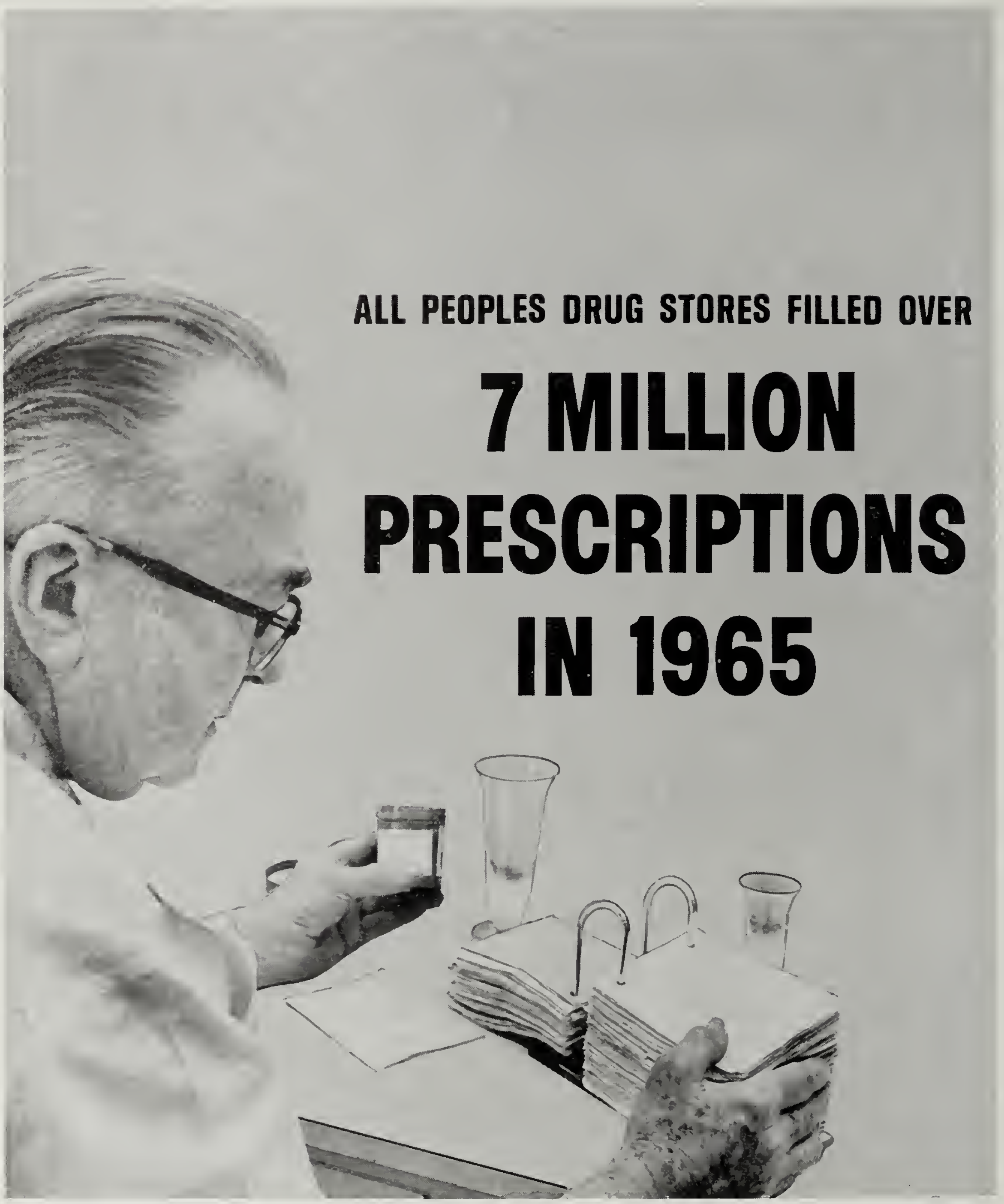
For these patients, Tetrex-F (tetracycline phosphate complex-nystatin) provides efficient tetracycline therapy against a broad range of infections *plus* protection against superinfection associated with the overgrowth of *C. albicans* in the G.I. tract.

Priced for savings

Tetrex-F (tetracycline phosphate complex-nystatin) is lowest in cost—priced 20% lower than most tetracycline/antifungal products.

BRISTOL THERAPEUTIC SUMMARY
For complete information consult Official Package Circular.
Indications: Infections of respiratory, gastrointestinal and genitourinary tracts and skin and soft tissues due to tetracycline-sensitive organisms, in patients with increased susceptibility to monilial infections.
Contraindications: The drug is contraindicated in patients hypersensitive to its components.
Warnings: Photodynamic reactions have been produced by tetracyclines. Natural and artificial sunlight should be avoided during therapy. Stop treatment if skin discomfort occurs. No cases of photosensitivity have been reported with Tetrex (tetracycline phosphate complex). With renal impairment, systemic accumulation and hepatotoxicity may occur. In this situation, lower doses should be used. Tooth staining and enamel hypoplasia may be induced during tooth development (last trimester of pregnancy, neonatal period and childhood).
Precautions: Bacterial superinfection may occur. Infants may develop increased intracranial pressure with bulging fontanels. In gonorrheal therapy, serologic tests for syphilis should be conducted initially and monthly for 3 months.
Adverse Reactions: Glossitis, stomatitis, nausea, diarrhea, flatulence, proctitis, vaginitis, dermatitis, and allergic reactions may occur.
Usual Adult Dosage: 1 capsule q.i.d. Continue therapy for 10 days in beta-hemolytic streptococcal infections. Administer one hour before or 2 hours after meals.
Supply: Capsules, bottles of 16. Each capsule contains tetracycline phosphate complex equivalent to 250 mg. tetracycline HCl activity and 250,000 units of nystatin. Oral Suspension, 60-ml. bottle. Each 5 ml. contains tetracycline equivalent to 125 mg. tetracycline hydrochloride and nystatin, 125,000 units.

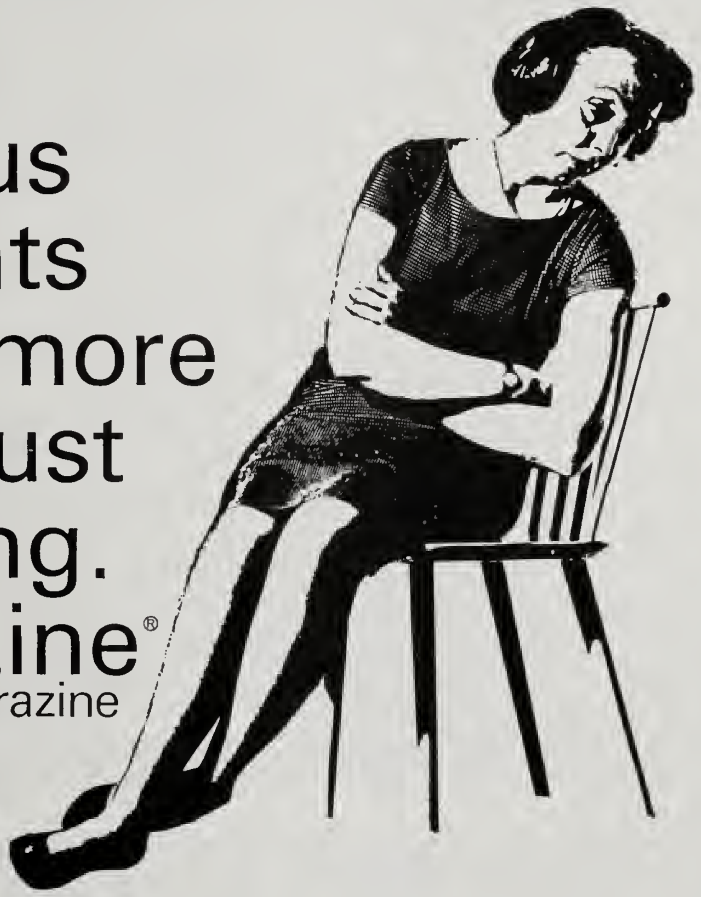
BRISTOL
BRISTOL LABORATORIES
Division of Bristol-Myers Co.
Syracuse, New York


ALL PEOPLES DRUG STORES FILLED OVER
7 MILLION
PRESCRIPTIONS
IN 1965

a measure of the trust people have in Peoples

Hands. Minds. Hearts that care. **Dedicated** pharmacists who are proud of Peoples' reputation. You can depend on these men and women, just as you can depend on Peoples to fill **your** prescription efficiently, courteously and professionally. Remember, at Peoples, **nothing** is as important as your prescription.

PEOPLES
PRESCRIPTION DRUG STORES

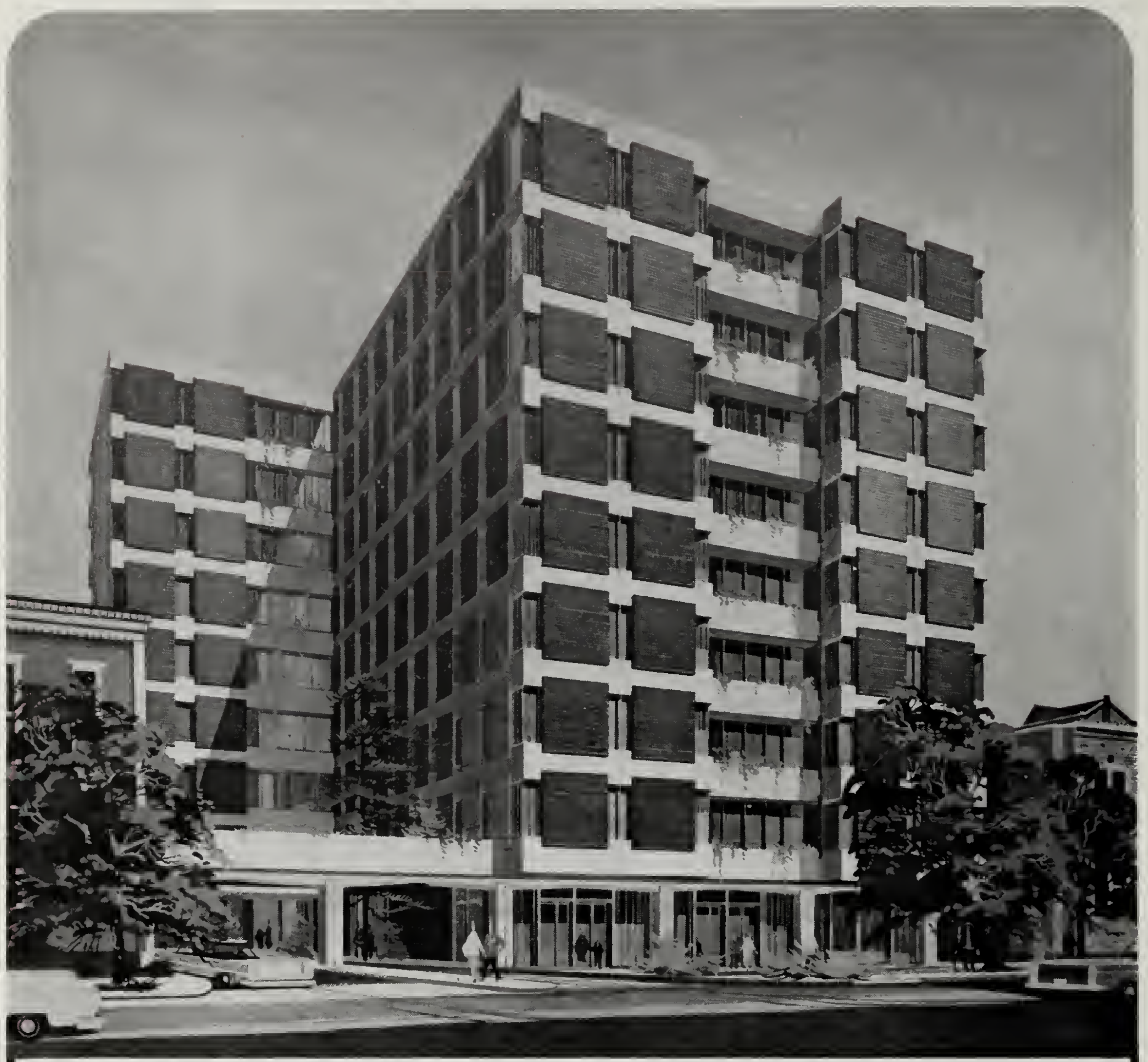


Many anxious patients need more than just calming. Stelazine®
brand of trifluoperazine
offers true tranquilization.

Sedative or muscle relaxant-type tranquilizers are often all that's needed for patients with temporary situational anxiety. But in the many patients whose anxiety presents a continuing problem these agents are limited by their generalized dulling effects.
'Stelazine' can attack anxiety directly without producing annoying dulling effects. On 'Stelazine', patients can react more normally to day-to-day stress yet remain alert, able to carry on their normal activities.

Contraindicated in comatose or greatly depressed states due to CNS depressants and in cases of existing blood dyscrasias, bone marrow depression and pre-existing liver damage. *Principal side effects,* usually dose related, may include mild skin reaction, dry mouth, insomnia, fatigue, drowsiness, dizziness and neuromuscular (extrapyramidal) reactions. Muscular weakness, anorexia, rash, lactation and blurred vision may also be observed. Blood dyscrasias and jaundice have been extremely rare. Use with caution in patients with impaired cardiovascular systems. Before prescribing, see SK&F product Prescribing Information.

SK&F Smith Kline & French Laboratories, Philadelphia



UNIVERSITY

MEDICAL BUILDING

2143 K STREET, N.W.
OCCUPANCY FALL 1966

ADJACENT TO GEORGE WASHINGTON UNIVERSITY HOSPITAL
SEVERAL CHOICE SUITES AVAILABLE IN WASHINGTON'S NEWEST MEDICAL BUILDING
CUSTOM DESIGNED FOR YOUR REQUIREMENTS

SHANNON · & · LUCHS
Realtors Since 1906

900 SEVENTEENTH STREET, N.W.

CALL MR. MORRISON
296-2345

VOLUME 35 • MARCH 1966

EDITOR
Wallace M. Yater, M.D.

MANAGING EDITOR
George W. Cooley

ASSISTANT EDITOR
A. Louise Eckburg

EDITORIAL BOARD
Brian Blades, M.D.
Frederic G. Burke, M.D.
I. Phillips Frohman, M.D.
Naomi M. Kanof, M.D.
Zigmond M. Lebensohn, M.D.
Thomas M. Peery, M.D.
Herbert P. Ramsey, M.D.
George E. Schreiner, M.D.
Donald Stubbs, M.D.

CONSULTING EDITORS
Brig. Gen. Joe M. Blumberg, MC, USA, Director, Armed Forces Institute of Pathology
Irving B. Brick, M.D., Professor of Medicine, Georgetown University School of Medicine
W. Montague Cobb, M.D., Professor of Anatomy, Howard University College of Medicine
Vernon Knight, M.D., Clinical Director, National Institute of Allergy and Infectious Diseases
Walter Kurland, M.D., Chief, Outpatient Service, Veterans Administration Hospital
Colonel Loren F. Parmley, MC, USA, Chief, Department of Medicine, Walter Reed General Hospital
Alvin E. Parrish, M.D., Associate Professor of Medicine, George Washington University School of Medicine
Captain Rufus J. Pearson, Jr., MC, USN, Director of Professional Services, U.S. Naval Hospital

●

THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

OFFICERS
Robert J. Coffey, M.D., President*
Henry D. Ecker, M.D., President-elect*
Lawrence A. Rapee, M.D., First Vice President*
Claudine M. Gay, M.D., Second Vice President*
Mr. George W. Cooley, Secretary-Treasurer*

EXECUTIVE BOARD
J. Spencer Dryden, M.D., Chairman (1966)
Karl C. Corley, M.D. (1967)
Edward W. Nicklas, M.D. (1968)
Paul R. Wilner, M.D. (1969)

DELEGATES TO AMA
Raymond T. Holden, M.D.*
C. Willard Camalier, Jr., M.D.*

LEGAL COUNSEL
Mr. Warren E. Magee

---

* Ex officio member of the Executive Board

MEDICAL ANNALS
of the
DISTRICT OF COLUMBIA

2007 Eye Street, N.W. Washington, D.C. 20006

The MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA is published monthly by the Medical Society of the District of Columbia for the promulgation of information of scientific, general medical and personal interest. All articles and correspondence should be sent to DR. WALLACE M. YATER, EDITOR, MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA, 2007 Eye Street, N.W., Washington, D. C. 20006.

EXCLUSIVE PUBLICATION: Articles are accepted for publication on condition that they are contributed solely to this journal.

MANUSCRIPTS: Manuscripts must be typewritten, double-spaced, and the original copy submitted.

ILLUSTRATIONS: Photographs and drawings for illustrations must be carefully marked and show clearly what is intended. MEDICAL ANNALS will bear the cost of engravings for 2 illustrations accompanying manuscripts submitted for publication. The cost of more than 2 engravings must be borne by the author.

REFERENCES: References should include the name of author (last name and initials), exact title of article, name of periodical, with volume, page (day of month in weekly), and year. References should be numbered consecutively in the order in which they appear in the text.

COPYRIGHT: Matter appearing in the ANNALS is covered by copyright but, as a rule, no objection will be made to its reproduction in reputable medical journals, if proper credit is given. However, the reproduction for commercial purposes of articles appearing in the MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA must have the approval of the Editor.

REPRINTS: Reprints may be obtained at cost.

ADVERTISING: Pharmaceutical advertising must be approved by the State Medical Journal Advertising Bureau, Inc. Other advertising copy may be accepted subject to the approval of the Editor. All copy or plates must reach the ANNALS office by the first of the month preceding publication. Display and classified advertising rates will be furnished on request.

SUBSCRIPTIONS: Subscription is included in the annual dues of members. To non-members the annual subscription price is: domestic, $5.00; Canadian, $5.50; foreign, $6.00, including postage; single copies, 50 cents.

Checks, etc. should be made payable to the Medical Society of the District of Columbia.

First aid for a button popper

Second aid for a button popper

TURN
30
4867-13
BAMADEX
SEQUELS
Sustained Release Capsules
077 619

By providing combined anorexigenic-tranquilizing action, BAMADEX SEQUELS Capsules help your nonshrinking patients to establish new patterns of eating less. The amphetamine component suppresses the appetite, while the meprobamate helps allay nervousness and tension. And for most patients, the *sustained* release of the active ingredients provides convenient one-capsule-a-day dosage.

Side Effects commonly associated with either component are possible but, to the extent these are dose-related, they should normally be mild and infrequent, since the total dosage of each component on the usual one-capsule-daily regimen is quite low. Also, the sedating effect of meprobamate and the stimulating effect of d-amphetamine sulfate tend, to some extent, to cancel each other out. Adverse effects not peculiar to either component have not been reported. Side effects associated with d-amphetamine sulfate include: insomnia, excitability, increased motor activity, confusion, anxiety, aggressiveness, increased libido, hallucinations, rebound fatigue, depression, dry mouth, anorexia, nausea, vomiting, diarrhea and increased cardiovascular reactivity. Effects associated with meprobamate include: skin rash, nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema, fever and transient leukopenia; also, very rarely, fainting spells, angioneurotic edema, bronchial spasm, hypotensive crisis, anuria, stomatitis, proctitis and anaphylaxis. Other serious effects have occurred after concomitant administration of meprobamate and other drugs. Massive overdosage may produce grave effects.

Precautions: BAMADEX SEQUELS should be given only under close supervision to patients hypersensitive to sympathomimetic drugs, with cardiovascular or coronary disease or who are severely hypertensive; to emotionally unstable persons and to epileptics. Patients should be cautioned not to drink alcoholic beverages while on the drug, and not to drive vehicles if they become drowsy. In all patients kept on the drug for long periods, the drug should be withdrawn gradually to avoid possible serious reactions.

Contraindications: Hyperexcitability, agitated prepsychotic states and a history of previous reactions to meprobamate.

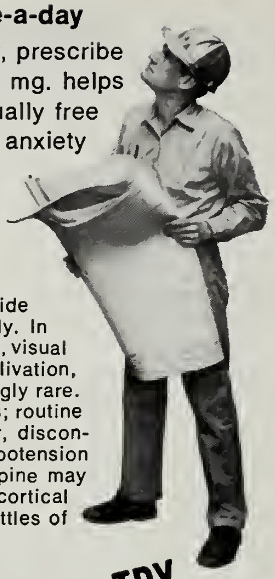
Bamadex® Sequels®

d-amphetamine sulfate (15 mg.) and meprobamate (300 mg.)

Sustained Release Capsules

LEDERLE LABORATORIES • A Division of American Cyanamid Company, Pearl River, New York

6655



Blueprint for dealing with tension due to stress — Prolixin — once-a-day

For the patient who must be on the job mentally as well as physically, prescribe Prolixin. The prolonged tranquilizing action of as little as one or two mg. helps him cope with tension all day long. Markedly low in toxicity and virtually free from usual sedative effects, Prolixin is effective in controlling both anxiety associated with somatic disorders and anxiety due to environmental or emotional stress. Patient acceptance is good — because Prolixin is low in cost, low in dosage and low in sedative activity. Prescribe Prolixin.

Side Effects, Precautions, Contraindications: As used for anxiety and tension, side effects are unlikely. Reversible extrapyramidal reactions may develop occasionally. In higher doses for psychotic disorders, patients may experience excessive drowsiness, visual blurring, dizziness, insomnia (rare), allergic skin reactions, nausea, anorexia, salivation, edema, perspiration, dry mouth, polyuria, hypotension. Jaundice has been exceedingly rare. Photosensitivity has not been reported. Blood dyscrasias occur with phenothiazines; routine blood counts are recommended. If symptoms of upper respiratory infection occur, discontinue the drug and institute appropriate treatment. Do not use epinephrine for hypotension which may appear in patients on large doses undergoing surgery. Effects of atropine may be potentiated. Do not use with high doses of hypnotics or in patients with subcortical brain damage. Use cautiously in convulsive disorders. **Available:** 1 mg. tablets. Bottles of 50 and 500. For full information, see Product Brief.

WHEN TRANQUILIZATION WITHOUT SEDATION IS DESIRABLE, TRY

PROLIXIN®

SQUIBB FLUPHENAZINE HYDROCHLORIDE

THE SQUIBB TRANQUILIZER

SQUIBB Squibb Quality — the Priceless Ingredient

Why do more District Doctors insure with The St. Paul?

Probably because our Professional Liability coverage is so thorough.

Really broad coverage. Fewer exclusions, so interpretations are no problem. The price is likely to be nice, too.

To get the folder that tells all about it concisely, write.

The St. Paul is the approved carrier for the State Medical Association here . . . and in more states than any other single insurance company. It must be something we offer!

Want to see just 1 insurance man and still be fully insured? Use our St. Paul Multicover Plan. Same agent as for Liability. He's in the Yellow Pages.

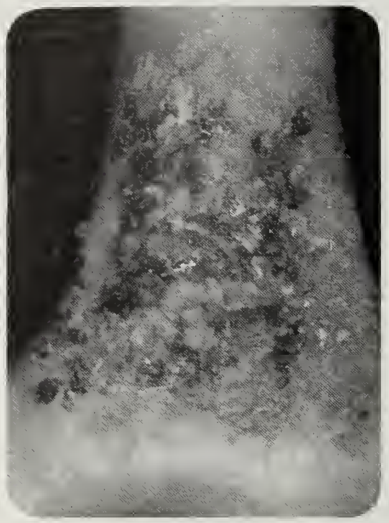
D.C. DEALER
Washington, D.C. 7735 Old Georgetown Road 20014 Phone: 656-3050

THE ST. PAUL
INSURANCE COMPANIES

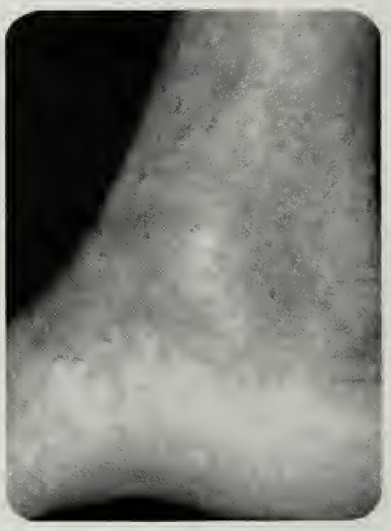
Serving you around the world . . . around the clock

St. Paul Fire and Marine Insurance Company
St. Paul Mercury Insurance Company
Western Life Insurance Company
St. Paul, Minnesota 55102

eczema: scourge of childhood



R. R., Age 11—Before treatment— atopic eczema of long standing



After treatment—with ARISTOCORT Topical Ointment 0.1% for two weeks

ARISTOCORT® Triamcinolone Acetonide Topicals have proved exceptionally effective in the control of various forms of childhood eczema: allergic, atopic, nummular, psoriatic, and mycotic.

In most cases responsive to topical ARISTOCORT, the 0.1% concentration is sufficiently potent. The 0.5% concentration provides enhanced topical activity for patients requiring additional potency for proper relief.

Administration and Dosage: Apply sparingly to the affected area 3 or 4 times daily. Some cases of psoriasis may be more effectively treated if the 0.1% Cream or Ointment is applied under an occlusive dressing.

Contraindications: Tuberculosis of the skin, herpes simplex, chicken pox and vaccinia.

Precautions and Side Effects: Do not use in the eyes or in the ear (if drum is perforated). A few individuals react unfavorably under certain conditions. If side effects are encountered, the drug should be discontinued and appropriate measures taken. Use on infected areas should be attended with caution and observation, bearing in mind the potential spreading of infection and the advisability of discontinuing therapy and/or initiating antibacterial measures. Generalized dermatological conditions may require systemic corticosteroid therapy. Steroid therapy, although responsible for remissions of dermatoses, especially of allergic origin cannot be expected to prevent recurrence. The use over extensive body areas, with or without occlusive nonpermeable dressings, may result in systemic absorption. Appropriate precautions should be taken. When occlusive nonpermeable dressings are used, miliaria, folliculitis and pyodermas will sometimes develop. Localized atrophy and striae have been reported with the use of steroids by the occlusive technique. When occlusive nonpermeable dressings are used, the physician should be aware of the hazards of suffocation and flammability. The safety of use on pregnant patients has not been firmly established. Thus, do not use in large amounts or for long periods of time on pregnant patients.

Packages: Tubes of 5 Gm. and 15 Gm.; ½ lb. jar.

PHOTOGRAPHS COURTESY OF M. M. NIERMAN, M.D.

Aristocort® Topical Ointment 0.1% and Cream 0.1%, 0.5%
Triamcinolone Acetonide

Also available in foam form and with neomycin.

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York

618-6

rochloroth
Paregoric
Nitroglycerin
elladonna
Codeine
Aspirin
Digitalis
Cortisone
Vitamins
Penicillin
Miltown®

An eminent role in medical practice

- Clinicians throughout the world consider meprobamate a therapeutic standard in the management of anxiety and tension.
- The high safety-efficacy ratio of 'Miltown' has been demonstrated by more than a decade of clinical use.

Miltown®
(meprobamate)

Indications: 'Miltown' (meprobamate) is effective in relief of anxiety and tension states. Also as adjunctive therapy when anxiety may be a causative or otherwise disturbing factor. Although not a hypnotic, 'Miltown' fosters normal sleep through both its antianxiety and muscle-relaxant properties.

Contraindications: Previous allergic or idiosyncratic reactions to meprobamate or meprobamate-containing drugs.

Precautions: Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of preexisting symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side effects: Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Usual adult dosage: One or two 400 mg. tablets three times daily. Doses above 2400 mg. daily are not recommended.

Supplied: In two strengths: 400 mg. scored tablets and 200 mg. coated tablets.

Before prescribing, consult package circular.

WALLACE LABORATORIES
Cranbury, N.J.

CM-9761

Low host resistance?

Consider the "extra" antibacterial activity of Ilosone®

Occasionally, therapeutic failure is due to the patient's inability to mobilize his defenses sufficiently to overcome infection. Typical of this is the debilitated patient, the premature infant, or the diabetic. It is in these patients that the high levels of antimicrobial activity of Ilosone are especially useful. Ilosone has demonstrated antibacterial levels two to four times those of erythromycin base or stearate. Furthermore, it attains them earlier and maintains them longer. Even the presence of food does not appear to affect the activity of Ilosone.

Contraindications: Ilosone is contraindicated in patients with a known history of sensitivity to this drug and in those with preexisting liver disease or dysfunction.

Side-Effects: Even though Ilosone is the most active oral form of erythromycin, the incidence of side-effects is low. Infrequent cases of drug idiosyncrasy, manifested by a form of intrahepatic cholestatic jaundice, have been reported. There have been no known fatal or definite residual effects. Gastro-intestinal disturbances not associated with hepatic effects are observed in a small proportion of patients as a result of a local stimulating action of Ilosone on the alimentary tract. Although allergic manifestations are uncommon with the use of erythromycin, there have been occasional reports of urticaria, skin eruptions, and, on rare occasions, anaphylaxis.

Dosage: *Children under 25 pounds*—5 mg. per pound of body weight every six hours. *Children 25 to 50 pounds*—125 mg. every six hours. *Adults and children over 50 pounds*—250 mg. every six hours. For severe infections, these dosages may be doubled.

Available in Pulvules®, suspension, drops, and chewable tablets. Ilosone Chewable tablets should be chewed or crushed and swallowed with water.

Ilosone®

Erythromycin Estolate

Additional information available to physicians upon request. Eli Lilly and Company, Indianapolis, Indiana. 501280

Lilly

MEDICAL ANNALS

of the District of Columbia

March 1966 VOLUME XXXV • NUMBER 3

Regeneration of the Liver after Major Hepatic Resection*

With an Illustrative Case

ERNST H. BREMER, M.D., JAMES BACOS, M.D., GUNTER AUGUSTIN, M.D., AND DOMENIC SABATINI, M.D.

NEXT TO ITS PHYSIOLOGIC RESERVES the liver also possesses an enormous regenerative power. While this fact, based on extensive laboratory and clinical evidence, has long been known to the physician dealing with acute and chronic parenchymal diseases of the liver, it has recently also attained considerable interest to the surgeon. With a more aggressive attitude in cancer surgery and changing concepts in the treatment of liver trauma, the fate of a patient after major hepatic resection has become of the same concern and interest to the surgeon as that of a patient after gastrectomy or intestinal resection. In spite of many unanswered questions, experimental and clinical experience reported over the past few years seems to prove that no other organ can be attacked as aggressively as the liver and regain a normal anatomic and functional status within a period of a few months. The capacity of the normal liver for regeneration seems to be almost unlimited. Bollman and coworkers[1] in serial operations have in 10-week intervals removed more hepatic tissue from experimental animals than there was originally present. At termination of their experiments the remaining liver mass was even slightly larger than at the first operation. These authors emphasize that during this entire experiment no hepatic deficiency was observed, except for transient functional disturbances immediately after surgery.

Many other laboratory investigators have demonstrated the regenerative power of the liver in different animal species. The rate of regeneration can easily be determined in experimental animals by repeated laparotomies. According to Pack[2, 3] regeneration of the rat liver occurs within 3 weeks after a 50 to 75 per cent resection; in the dog this process requires approximately 8 to 10 weeks. Two interesting observations have been made by different examiners during those experiments. The rate of regeneration seems to be inversely proportional to the size of the animal, and the larger the portion of liver removed the more rapid and complete regeneration will be.

To our knowledge only Pack and associates[4] have so far publicized their interesting direct visual observations on 4 patients on whom they have had the opportunity to reoperate between 2 months and 2 years after previous hepatic lobectomies. They found the previously resected liver lobe replaced by a globular, spheroid-shaped mass of grossly normal-appearing liver tissue of the same or slightly larger volume as the original lobe. These observations are verified by the findings of Gould,[5] who had occasion to reoperate on 2 of his patients 14 and 36 months after the removal of the right lobe for a hepatoma and a large hemangioma.

McDermott and co-workers[6] have demonstrated complete regeneration of the human liver 4 and 6 months after 85 and 90 per cent resections by the use of rose bengal I^{131} liver scans in the same fashion as we have done it 15 weeks after complete right lobectomy with the use of Au^{198} for the scintiscan. We believe that the aortogram in our case adds another interesting feature as to the revascularization of the regenerated liver mass.

---

* From the Departments of Surgery (Bremer), Cardiology (Bacos), and Radiology (Augustin and Sabatini), Washington Hospital Center, Washington, D. C. 20010.

Most investigators in the past directed their main interest toward the regenerative capacity of the cirrhotic liver.[7-10] The majority of them agree that regeneration of the liver in the presence of an extensive cirrhotic process does not occur. Islami, Pack and Hubbard,[10] however, have shown some interesting results of their investigations. Cirrhosis in their experimental animals was caused by administration of carbon tetrachloride. Partially hepatectomized rats in the early stage of cirrhosis regenerated their liver and recovered from cirrhosis as the unoperated control animals. Rats in the group of severe advanced cirrhosis that underwent partial hepatectomy regenerated histologically normal liver substance completely after 3 months. They had no ascites and had gained weight, while the nonoperative control group continued to show ascites and weight loss. The delay in regeneration compared to noncirrhotic rats is interesting. The authors believe that the difference in their own results to those of other investigators is probably due to the nutritional status of the animals, their own longer observation period after hepatectomy, the greater amount of liver tissue resected in their series, and the age of the animal used for these studies. Since there is a marked resemblance between the architectural distortion of the well established human cirrhosis and the carbon tetrachloride-produced cirrhosis in rats,[11] their results encouraged these authors to state that "a study of the possible applicability of massive partial hepatectomy as a technique for the treatment of human cirrhosis is a realistic and promising goal."

We feel certain that ways and means will have to be found first to determine accurately the type of patient in all details from his nutritional state to the state of the cirrhosis for whom such therapeutic resection would be beneficial rather than fatal. Lin and Chen[12] recently reported their experience in a series of patients with hepatomas who were treated by partial hepatic resection. Whereas the surviving noncirrhotic patients demonstrated restoration of liver function and regeneration, 5 patients with concomitant cirrhosis failed to show any regeneration of the cirrhotic liver remnant and experienced only a short-term improvement in its function. However, it has to be noted in this study, carried out in Formosa, that no mention is made of the patients' general condition nor the extent of their malignant or cirrhotic disease, except that there was a considerably greater incidence of abnormal liver function tests found in those patients with coëxisting cirrhosis.

Regenerative hyperplasia is probably the most accurate term for the rapidly enlarging liver mass after a major resection. The suspicion might occur that edema and vascular engorgement are the primary cause for the enlargement, particularly if one considers that the entire hepatic inflow after a major resection is suddenly shunted into a small remaining portion of liver tissue. The findings of Fisher and co-workers,[13] as well as those of Islami et al,[3] do not only indicate that histologically the regenerated tissue resembles normal liver tissue, but they have also shown that the lipid, nitrogen and water content of the regenerated tissue were identical with that of normal liver. Furthermore, nuclear counts performed on homogenized, regenerated liver have rendered results identical to those obtained on normal tissue.

Regeneration seems to begin almost instantly after resection.[14] MacDonald and colleagues[15] have shown that after a necessary minimal resection of 9 to 12 per cent of the mouse liver great DNA-synthesis is demonstrable after 24 hours in the liver as an expression of beginning mitosis and cell regeneration. Lin and Chen[12] demonstrated slight enlargement after 1 or 2 weeks but definitely after 3 weeks in the human liver by means of a rather coarse radiographic method.

The true histomorphologic events taking place during the regenerative phase of the remaining portion of the normal liver after partial resection have found only little attention in the literature. There seems to be great disunion not only of opinions as to the origin of the different elements, such as liver cells, ducts, vascular structures and connective tissue, but even as to the nomenclature. It might be justified to assume patterns of regeneration for the normal liver as they occur during the reversal of, and the recovery from a cirrhotic process. At the earliest stage there seems to be a rather irregular arrangement of hepatic parenchymal plates and what appear to be new sinusoids.[16] The new liver cells appear swollen and rounded, mitotic figures appear very soon after operation, and the lobules appear larger than normal in the early phase of regeneration. Small vascular spaces seem to abut directly upon the outer membranes of parenchymal cells. This arrangement reminds us of the formation of adenoma-like nodules described by Karsner[17] in the late cirrhotic stage.

As for different theories of the origin and formation of bile canaliculi and finer vascular structures we refer to the work of Moschcowitz[18] and Cameron.[19] At a later stage the sinusoidal spaces seem to be separated by parenchymal plates several cell layers thick until these eventually in the late postoperative period reduce to the normal 1-cell layer thickness, at which time the regenerated liver has assumed a normal histologic structure again.

For a long time surgeons have been intimidated to attempt major hepatic resections for several reasons. The right lobe of the liver constitutes by weight 80 per cent of this, the largest organ in the human body. Its vast circulatory structure composed of 3 different systems, arterial, venous and biliary channels, led to the comparison with a large vascular sponge and created fear of uncontrollable hemorrhage. There was the supposed hazard of hepatic insufficiency added to this fear. Physiologists had told us of some 70 different functions the liver possesses, some of them of vital importance to the human organism. With more exact knowledge of the organ's finer anatomy and improved operative techniques we now can safely resect 80 and 90 per cent of the entire organ. There is ample evidence that the resected mass will regenerate within 4 to 6 months from as little as 10 per cent remaining normal liver tissue. Equally impressive is the enormous functional reserve which this small remaining portion of liver tissue possesses. A sufficient number of major resections have been carried out by now to establish a fairly clear picture of the usual uncomplicated course after such procedures. Our own observations[20] concur with those of many other authors.[4, 6, 12, 21, 22]

To the surgeon who has just performed his first major hepatic resection one routine postoperative event might cause a few frightening days. By the third or fourth postoperative day the patient will show clinical and chemical evidence of jaundice. Both direct and indirect fractions of the van den Bergh reaction will be elevated. This, however, is no cause for alarm and does not indicate faulty ligation of the biliary drainage structures of the liver remnant. It is a transient phenomenon most likely due to compression of the intrahepatic bile ducts by the marked intrahepatic vascular congestion. Shunting of the entire hepatic inflow, venous as well as arterial, into the small remaining portion of the liver after ligation of the right hepatic artery and right branch of the portal vein is responsible for this congestion. By the beginning of the second postoperative week this jaundice will usually subside and bilirubin levels will return to normal. An elevation in serum enzymes (SGOT, LDH and alkaline phosphatase) will parallel this event. Immediate postoperative metabolic changes of clinical importance are a moderate hypoglycemia and a significant hypoproteinemia, particularly a decline in serum albumin. The immediate decline in blood sugar has to this point not clearly been related to the resection or its extent. The usual postoperatively administered parenteral fluids of dextrose or invert sugar greatly mask the existing hypoglycemia, and the necessity of these fluids in the immediate postoperative period makes a study of this phenomenon very difficult. Because of their administration, however, we believe that the hypoglycemia is of no true clinical significance.

Most authors indicate a need for a constant infusion of dextrose or invert sugar for the first 48 hours postoperatively. There is no observation of persistent hypoglycemia reported. Once the patient begins to take carbohydrates orally again there may occur a mild hyperglycemia, as observed by McDermott.[6] However, normal patterns of glucose tolerance seem to be restored by the second postoperative week. McDermott has also demonstrated changes in the lipid metabolism indicating a rapid decline of triglycerides and a slower decrease of cholesterol and cholesterol esters. By the end of the second or during the third postoperative week normal levels are reached again. Persistently low cholesterol esters beyond this point indicate impaired function of the liver remnant. The usual liver function tests show only minor deviations from normal for the first 2 weeks. Both prothrombin and fibrinogen levels are depressed in the immediate postoperative phase. We have no knowledge of any reports in the literature nor have we observed in our own case depression of these levels to a point where significant clinical disturbances in clotting or coagulation had occurred.

Of most important clinical significance in our opinion is the decline in serum proteins, particularly the albumin fraction. It seems imperative to counteract this deficit by daily infusions of human serum albumin or plasma for the first postoperative week. Beyond this point serum levels begin to increase and reach normal levels again by the end of the third postoperative week. Neglect of this very important metabolic requirement may lead to extensive disturbance of the normal colloidal osmotic pressure in the circulatory compartment, with consequent peripheral edema and eventually pulmonary edema and the patient's demise. Electrolyte balance deserves close attention in the postoperative period, particularly if there is excessive and prolonged bile drainage from the operative site.

Past experience indicates that beyond the third week after major hepatic resections liver function has reached levels again that are sufficient for normal metabolic processes. Minor deficiencies of no clinical significance can still be detected by laboratory methods beyond this point for several weeks.

Many interesting questions remain so far unanswered as to the stimulus that initiates such extensive and rapid regeneration of the largest organ of the human body and enables a tiny remnant of it to maintain functions to an extent to which they are normally carried out by tissue 8 to 10 times its volume.

At present it is generally accepted that the sudden increase of blood supply into the small liver remnant is probably the main stimulating factor. Since only 1 branch of the hepatic artery as well as the portal vein can be ligated, the entire hepatic inflow is necessarily shunted into a remnant of any size. The smaller this remnant is, the greater is its blood supply. Here may be the reason why the rapidity of regeneration has been found to be inversely proportional to the size of the remaining liver substance.

Many investigators attribute particular importance to the portal vein inflow. Animal experiments have demonstrated repeatedly that greatly delayed or no regeneration at all occurs if the portal inflow is diverted by a shunt procedure.[13, 14, 23, 24, 25] Fisher and co-workers[13] have shown that arterialization of the inflow into a liver remnant after partial resection even in the presence of a porta caval shunt hastens regeneration. Pack[26] states that the rapidity of regeneration is directly proportional to the degree of portal hypertension created by ligating one-half of the liver inflow-tract. This portal hypertension will gradually subside and normalize as regeneration progresses. He feels that it is conceivable that in cases of deficiency of the residual liver or impairment of its vascular supply arterialization of the portal venous inflow may find clinical application in the human patient.

Humoral factors, stimulating as well as inhibitory in their effect, have been postulated to influence hepatic regeneration. Experiments with parabiotic rats were believed to render a basis for this assumption. While one of the parabiotic animals underwent partial hepatectomy the nonoperated animal supposedly showed sudden increase in the size of its liver. Neither are these reports unanimous nor has such a factor ever been isolated.[6]

Pack[26] reported experiments in cortisone-stimulated hepatectomized rats that showed acceleration of the regenerative process compared with controls not receiving cortisone. Two of his patients, almost moribund after hepatectomy, showed almost immediate and successful recovery subsequent to cortisone administration.

For the clinical surgeon the liver has lost its long maintained position of being inaccessible to him. With proper preparation of the patient, knowledge of the detailed anatomy of this organ, improved surgical and anesthetic techniques, and recognition of the particular needs of the postoperative phase, the patient with unilobar primary or metastatic malignant disease or extensive trauma should no longer be considered beyond surgical help.

Illustrative Case

A 13-year-old boy underwent surgical repair of extensive trauma to the right lobe of the liver, suffered in an accident. He made an uneventful recovery. Two weeks after his hospital discharge he vomited some blood and 4 weeks after discharge he had to be readmitted because of evidence for continuing, by now greatly increased, gastrointestinal hemorrhage. Blood transfusions became necessary. With the knowledge of his recent history the tentative diagnosis of hemobilia was made and eventually proven preoperatively. A liver scan showed a large area of greatly diminished function in the right lobe of the liver, and a retrograde aortogram demonstrated extravasation of the dye from an intrahepatic branch of the right hepatic artery. Other bleeding sources were eliminated as well as possible by conventional methods. Because of the extent of the injury and reasons discussed elsewhere[20] a complete right hepatic lobectomy was performed. He withstood the procedure well. His postoperative course, though uncomplicated, was characterized by the typical features discussed earlier. On his fourth postoperative day he became jaundiced. His total bilirubin rose to 5.6 mg. (1.0 direct, 4.6 indirect). SGOT rose to 200 units, and the alkaline phosphatase was elevated to 3.3 B.L. units. Total proteins on the second postoperative day were 5.6 Gm., with 3.6 Gm. albumin and 2.0 Gm. globulin. With daily infusions of 12.5 and later 25 Gm. of human serum albumin, the proteins returned to normal in the second postoperative week

(4.8 and 2.2 Gm.). At the beginning of the third postoperative week the icterus had subsided. Prothrombin activity varied only minimally, probably explained by daily doses of vitamin K with his infusions of invert sugar and electrolytes.

Fifteen weeks after right lobectomy he was studied again. Total proteins were 6.8 Gm. (albumin 4.6 Gm., globulin 2.2 Gm.). Prothrombin activity was 90 per cent. A repeated liver scan at this time (figure 1) showed complete regeneration of the right lobe of the liver in the typical globular spheroid shape. The dotted line shows the approximate level of previous transection. For lack of a scan immediately postoperatively we show as comparison the resected right lobe that includes the gallbladder (figure 2) that was filled with a mixture of bile and blood at the time of resection. A retrograde aortogram according to the Seldinger method (figure 3) with the catheter advanced to D-10 or D-11 permitted flushing of the celiac axis and filling of the hepatic artery. After the take-off of the gastroduodenal artery one can recognize the cephalad course of the left hepatic artery from which numerous sizable vessels emerge that can be followed far to the right into the regenerated portion of the liver.

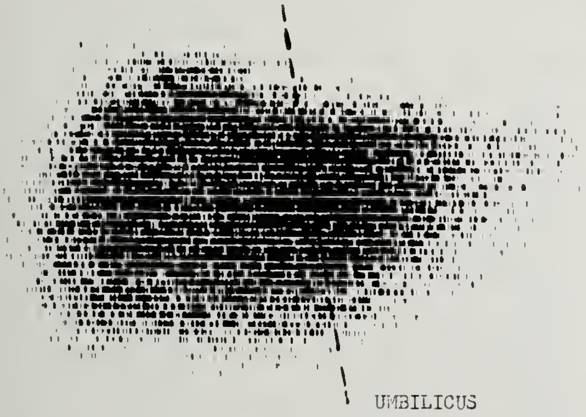


FIG. 1. Liver scan (Au^{198}) 15 weeks after total right lobectomy. Dotted line indicates approximate level of previous resection.

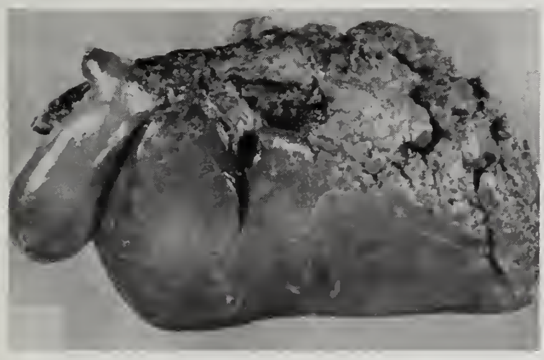


FIG. 2. Resected right lobe of liver with gallbladder for comparison.

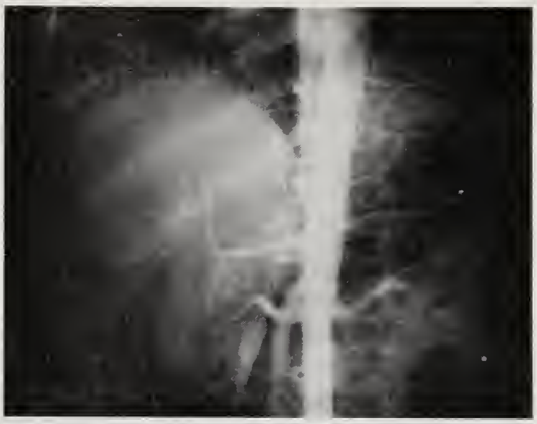


FIG. 3. Retrogarde aortogram showing numerous vessels coming from left hepatic artery into regenerated liver substance.

Six weeks after the hepatic resection the patient returned to school. As of the twelfth postoperative week he is fully active in all phases of a 13-year-old's life. His nutritional and developmental status is that of a normal teenager and without any suggestion of his having suffered or being inhibited by the surgical procedure.

Summary and Conclusion

Different aspects of liver regeneration after major hepatic resection have been discussed. Gross, microscopic and functional features have been described, as well as stimuli suspected to influence regeneration.

Gross regeneration has been illustrated in a case of total right hepatic lobectomy for hemobilia with hepatic scan and retrograde aortogram 15 weeks after resection.

Recent knowledge acquired of hepatic regeneration and functional reserve of the post-resection liver remnant, of detailed intrinsic anatomy of the liver, and of the surgical approach to the organ should encourage the surgeon to a more aggressive attitude toward benign tumors, unilobar primary and metastatic malignant disease, and extensive trauma of the liver. With the use of modern diagnostic techniques, adequate preoperative preparation, proper operative technique, and knowledge of the particular needs of the postoperative patient, major hepatic resections have become possible and safe.

References

1. Bollman, J. L., in Schiff, L., edited by: Diseases of the Liver. Philadelphia: Lippincott, 1956, p. 46.

(*Continued on page 172*)

The Status of Stereotaxic Surgery for Movement Disorders and Intractable Pain

ALFRED J. LUESSENHOP, M.D.*, JOHN L. FOX, M.D.†, AND RUDOLF KACHMANN, M.D.‡

Our purpose here is to relate some experiences in the use of stereotaxic surgery in the treatment of a variety of clinical disorders and to outline briefly the current status of this in the management of disorders of movement (dyskinesias) and intractable pain.

Stereotaxy is the methodology for selective interruption of certain nuclear areas and tracts, mostly within the thalamus and adjacent structures, by the intracerebral placement of an electrode or probe according to predetermined reference points with the use of radiologic control. Though of greatest use for treatment of the dyskinesias and only to a lesser extent intractable pain, it can be employed for destruction of the pituitary gland,[1, 2] is of proven value in mamillary cancer and diabetic retinopathy, and has had limited or experimental applications in the psychoses,[3, 4] intractable seizures,[4] cerebral neoplasms,[5, 6] arteriovenous malformations,[7, 8] and saccular aneurysms.[9]

There have been 2 major problems for this surgery. The first arises from anatomic variations of the brain. Identical or comparable nuclei or tracts may not have the same locus with reference to the anatomic landmarks used for directing the electrode or probe. To correct for this in part, various aids can be employed consisting of preliminary electrical stimulation and recording of the brain waves from the tip of the electrode or the creation of temporary or gradual lesions while the clinical effects are carefully assessed.

The other problem, upon which the safety of the technique most depends, is creating the lesion itself. Ideally, it should be of controllable and reproducible shape and size and carry no risk of rupturing an adjacent artery. Of numerous methods employed, alcohol, procaine, wax, radioactive isotopes, electrolytic and wire loop section, the 2 of current importance are heat lesions produced by controlled radiofrequency power[10] and cold lesions (cryogenic lesions) with the use of a liquid nitrogen probe.[11, 12] The most recent clinical and experimental evidence[13, 14, 15] favors the greater safety of the radiofrequency heat lesion, and therefore we have adopted its use. Other experimental efforts to obviate passage of an electrode through the brain have been focused ultrasound[16] and the use of heavy particles of radiation or proton beams,[17] but in neither has this theoretical advantage been fully realized.

This surgery is not specific treatment for a neurologic disorder but rather a maneuver to eliminate or reduce certain associated symptoms. In parkinsonism, for example, these are rigidity and tremor, and when these are the major accompaniments of the disease surgery offers a good chance of long-term rehabilitation. However, when these 2 symptoms contribute but minimally to the entire symptom-complex, the surgical effort may achieve little toward this goal.

The neurophysiologic mechanisms by which interruption of certain tracts and nuclei in or around the thalamus favorably alters tone and movement remain problematical. However, for many of the movement disorders it appears that the basic abnormality is faulty relay or feedback of sensory information to the cerebral cortex, thereby elaborating a distorted sensory background for the performance of motor acts or the maintenance of postural tone. After surgical interruption of these faulty circuits, movement and tone return to normal with the use of compensatory sensory mechanisms which are as yet unknown.

Materials and Methods

Our experience now includes 54 operations in

---

* Associate Professor of Surgery (Neurosurgery), Georgetown University School of Medicine; Chief, Division of Neurological Surgery, Georgetown University Hospital; Senior Attending in Neurosurgery, Children's Hospital of the District of Columbia; Consultant in Neurosurgery, Veterans Administration Hospital, Washington, D.C.

† Chief, Division of Neurological Surgery, Veterans Administration Hospital, Washington; Clinical Instructor in Neurological Surgery, Georgetown and George Washington University Schools of Medicine.

‡ Senior Assistant Resident in Neurological Surgery, Georgetown University Hospital.

34 patients with diverse clinical problems (table 1). Initially we employed the method of chemothalamotomy (devised by Cooper[18]) which is essentially creation of a small cavity within the brain by inflation of a balloon at the tip of a probe and later instillation of a Pantopaque and absolute alcohol mixture to permanently fix the lesion. Two minor and 1 serious complication with this technique led to our abandoning it early in our experience. Thereafter we have used a radiofrequency lesion-generator (perfected by Aronow[10]) with an electrode 1.6 mm. in diameter. A burr hole is made 3.5 to 4 cm. from the midline and just in front of the coronal suture. In some of the cases air is introduced via the lumbar theca, but in most cases a ventricular needle is passed to the frontal horn with the patient's head on the side, and 30 to 50 c.c. of air and spinal fluid are exchanged. This affords satisfactory X-ray definition of the foramen of Monro and frequently the entire third ventricle. Initially, we used the central X-ray beam at a 6-foot source to cassette distance to minimize magnification and distortion. We now use the Rand-Wells stereotaxic unit which permits very precise preliminary X-ray alignment of the intracerebral target with the electrode holder such that the electrode may be advanced directly to the target with a single passage through the brain (figure 1).

TABLE 1: Patients Treated by Stereotaxic Surgery

DIAGNOSIS	NO. PATIENTS	NO. OPERATIONS
Parkinsonism	24	37
Intractable pain	2	3
Huntington's chorea	1	2
Dystonia musculorum deformans	3	6
Cerebral palsy (athetosis)	1	2
Spasticity	1	2
Intention tremor	2	2
TOTALS	34	54

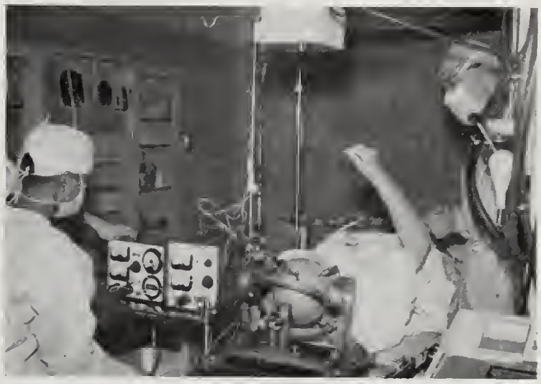


FIG. 1. Electrode has been advanced to left ventrolateral nucleus of thalamus and a radiofrequency lesion is being created with monitoring of temperature and continuous clinical evaluation of patient.

The target for our first cases was the mesial globus pallidus, but thereafter we used the ventrolateral thalamic nucleus. The internal landmarks, identified by pneumography, which correspond to this are 13 mm. from the midpoint of the third ventricle and 6 mm. below and 13 to 15 mm. behind the midpoint of the foramen of Monro (figure 2). For parkinsonism cases with

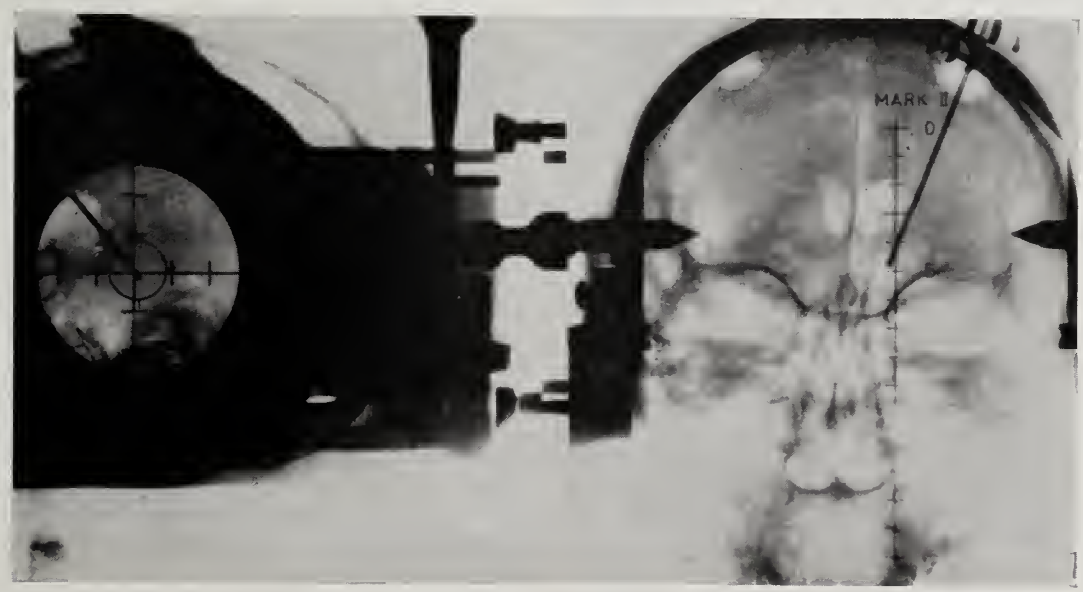


Fig. 2. Lateral and anteroposterior views showing alignment of intracerebral target and electrode preliminary to creation of the radiofrequency lesion.

severe and wide amplitude tremor the lesion has been made slightly behind this at 15 to 17 mm. The lesion is oval, measuring approximately 0.6 by 0.3 cm., and made gradually with the patient alert, permitting continuous testing. In children the burr hole, introduction of air and positioning in the stereotaxic frame are carried out under general anesthesia, but the child is allowed to awaken before the lesion is made.

Parkinsonism

Clinically this disease may be divided into 3 forms: (1) in association with general senility, (2) of obscure etiology in younger patients and manifest mainly by rigidity and tremor, and (3) as a sequela of encephalitis, where, in addition to abnormalities of tone and tremor, autonomic symptoms, consisting of sialorrhea and increased sweating, and certain ocular abnormalities are more frequent. There are approximately 3½ million parkinsonians in the United States, and about 30 to 40 thousand new cases appear each year. Of these about 1 in 5 may become a candidate for this palliative surgery. The most suitable are those with unilateral involvement only and little, if any, psychic deterioration. Undesirable candidates are those with severe bilateral involvement, mental deterioration, pseudobulbar signs, and bradykinesia (paucity of movement). Lesions in the ventrolateral nucleus of the thalamus have been about 80 per cent effective in alleviating contralateral rigidity and tremor.[19] Bradykinesia, oculogyric crises, and other autonomic symptoms are influenced to a much lesser extent if at all. Bilateral operations are indicated in some cases, but, in general, slight impairment of speech and memory may ensue after the second operation.[20, 21] With a radiofrequency lesion the combined operative morbidity and mortality should be below 5 per cent.

The case history of a good candidate with bilateral involvement follows:

A 57-year-old white woman had a 9-year history of progressive stiffness and shaking of all her extremities, the left more than the right. She was forced to give up her work as a secretary. Examination revealed masked facies, slight impairment of speech, a low-amplitude resting tremor of the left hand and foot, and moderately severe bilateral cogwheel rigidity. Her gait was festinating, and she tended to walk on her toes with absence of associated arm movements.

On June 10, 1965 a right ventrolateral thalamotomy by means of a radiofrequency lesion was performed. Immediately there was disappearance of the rigidity of her left side and no evidence of tremor. She had complete and normal use of the left hand and leg throughout the remainder of her hospitalization and showed no untoward effects.

She was readmitted 1½ months later. She continued to be free of the tremor and rigidity on the left side. The procedure was repeated on the left side on July 27, 1965. There was immediate alleviation of the rigidity and tremor of the right extremities. The postoperative course was uneventful, and at the time of discharge the patient was freely ambulatory with return of bilateral associated arm movements and improvement of the festinating gait. Since discharge she has been able to return to work.

Dystonia Musculorum Deformans (Torsion Spasms)

Though frequently seen with other mixed types of movement disorders in the broad category of cerebral palsy, this disorder may appear as an isolated clinical entity. In almost one-half of the cases there is a family history and in others a history of encephalitis, but many patients give no history of previous neurologic disease. Symptoms begin between the ages of 6 and 21 years. The younger patients are apt to develop severe scoliosis and bilateral involvement, and the older patients more frequently have associated torticollis or retrocollis. In many cases there is normal preservation of intellect at a time when the movement disorder is completely disabling. Unilateral and bilateral thalamic lesions have been successful in totally eliminating all the symptoms of this disorder, and the overall good results may be close to 75 per cent.[22, 23, 24] Generally maximum improvement is not reached for 4 to 6 weeks. Thalamic lesions are well tolerated in this age group, but surgery may be contraindicated in those with marked generalized cerebral involvement as manifested by a low IQ or enlarged ventricles on pneumography.

The case history of a typical patient with moderately severe bilateral extremity involvement and incapacitating retrocollis follows:

A 13-year-old white boy had been the product of a difficult labor and had required intensive resuscitation. His speech and motor development were moderately retarded, and he required speech therapy until 5 years of age. At 8 years he had difficulty holding his head in an erect position and had ataxia of gait which improved spontaneously after 6 months. Five months before admission a tendency for retrocollis appeared and gradually increased with associated dystonic posturing of the arms and legs. Despite a variety of medications this worsened and he was unable to attend school. He ambulated by holding his head erect with both hands (figure 3).

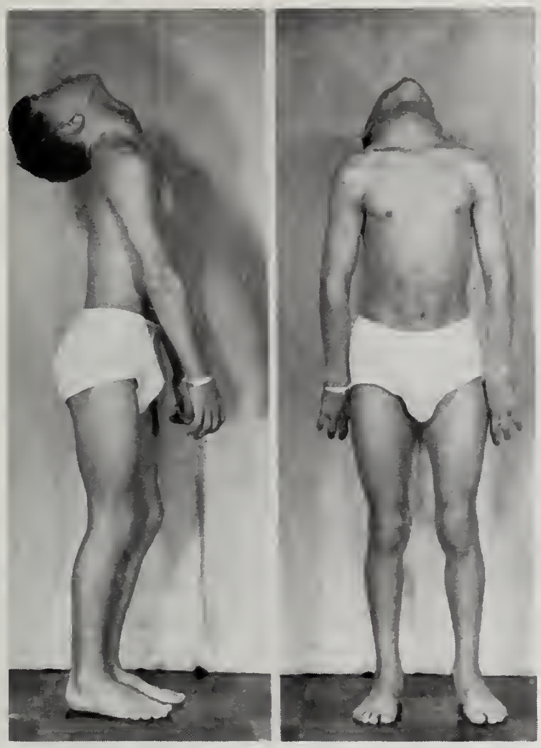


FIG. 3. Preoperative photographs of 13-year-old boy with bilateral dystonia musculorum deformans and severe retrocollis.

On June 10, 1964 a left radiofrequency ventrolateral thalamotomy was performed. Within 24 hours he showed improvement in his retrocollis with a tendency for the head to deviate to the left rather than backward. On June 19 he underwent a radiofrequency pallidotomy on the right side. There was no immediate change in his neurologic status. His preoperative medications were resumed, and after 2 to 3 weeks there was such sustained improvement that 2 months following surgery the retrocollis completely subsided and the dystonic posturing of the arms and legs was barely evident. He was able to resume school (figure 4).

Intention Tremor

This disorder may be familial or of varying etiologies including encephalitis, cerebrovascular disease, multiple sclerosis, and trauma. When appearing as a unilateral, isolated abnormality the results of thalamic lesions have been impressive with over 90 per cent good results.[25, 26, 27] A typical patient whose intention tremor followed a severe head injury is described as follows:

A 36-year-old Negro sustained a severe head injury 29 months before admission. He remained in coma for 7 weeks, and during his subsequent rehabilitation noted paresthesias in his extremities, ataxia of gait, and a persisting intention tremor of the right arm. With physiotherapy his gait improved steadily but the marked intention tremor persisted. At the time of admission he had a slight truncal ataxia. There was a wide amplitude intention tremor of the right arm and severe impairment of rapid alternating movements. No resting tremor was evident. There was a mild reduction of tone in the right arm.

On July 15, 1965 he underwent a left ventrolateral thalamotomy by means of a radiofrequency lesion. Immediate complete relief of the intention tremor ensued. For 2 days following surgery he showed a slight right hemiparesis which cleared in about 10 days. No evidence of intention tremor reappeared, and he had virtually full use of the right arm.

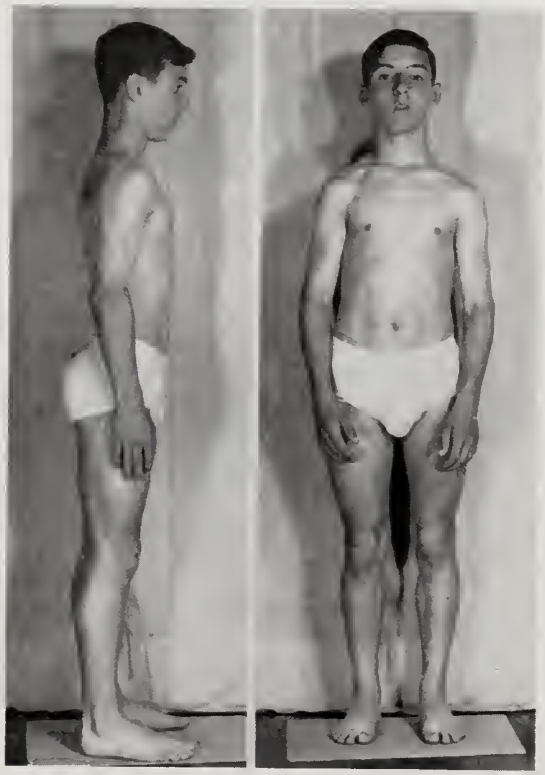


FIG. 4. Same patient as in figure 3 11 months following bilateral radiofrequency ventrolateral thalamotomies.

Chorea

In the broad area of cerebral palsy this movement disorder may appear with various combinations of disorder of tone, athetosis, and dystonia. The pure form may occur as a self-limiting disease during childhood illnesses (Sydenham's chorea). In adulthood it is a major involuntary movement disorder called Huntington's chorea. Some of these patients may be candidates when the progression of their mental deterioration is very slow. The total number of patients operated on is limited, and the ultimate results are only fair.[4, 22, 26] A patient with severe Huntington's chorea in whom we achieved satisfactory amelioration after bilateral surgery is described as follows:

A 34-year-old white man with a family history of Huntington's chorea first noted choreiform movements of both hands and abdominal muscles at the age of 16 years. These gradually increased in severity until he was unable to perform skilled movements with his hands and ambulated in a bizarre, choreiform fashion. Psychologic testing indicated only mild mental deterioration. A pneumoencephalogram showed moderate ventricular enlargement and associated cortical atrophy.

On May 5, 1965 he underwent a right ventrolateral thalamotomy with a radiofrequency lesion. The lesion was intentionally enlarged laterally to include a portion of the adjacent internal capsule. There was immediate disappearance of the choreiform movements of the left side, and a mild left hemiparesis and cortical sensory loss developed. Over the ensuing 2 weeks the latter improved until the patient had good movement of the left extremities with no significant choreiform movements superimposed.

On May 25 the procedure was repeated on the left side. The lesion was not extended into the internal capsule. For the first 2 weeks postoperative he was bradykinetic but thereafter improved so that he was able to use his right hand for eating. Four months after surgery he could ambulate freely and use both hands for skilled movements. There were some recurrent choreiform movements of his head and slight dystonic posturing of both arms, but in general he showed considerable improvement.

Cerebral Palsy

This term embraces the various combinations of disorders of tone and movement during infancy and childhood with or without an interval of apparent normal motor development. Usually there are both pyramidal and extrapyramidal symptoms and some degree of mental retardation. Resting tremor is very rare. Seizures are common. There is now substantial experience with the effects of various lesions both in the thalamus and globus pallidus, and, in general, patients with only slight paresis or pyramidal involvement, relatively quick active movements, and the hyperkinetic phenomenon have responded satisfactorily. The patients with severe paresis and slow active movements may show minor transient improvement, but the ultimate results have not been encouraging.[28-32]

Our experience includes 2 patients in this category:

The first was a 12-year-old retarded child whose severe bilateral athetosis appeared in the postnatal period. A unilateral ventrolateral thalamic lesion, which was enlarged at a second stage 1 week later, afforded only slight transient improvement. The second patient, an 8-year-old child, had developed severe bilateral rigid spasticity following an episode of postoperative anoxia. Bilateral thalamic lesions produced transient improvement and some alleviation of pain, but the overall result was of questionable value.

Torticollis

Abnormalities of head posturing as an accompaniment of dystonia musculorum deformans have responded well to bilateral thalamic lesions. However, as an isolated entity in adulthood the stereotaxic results remain *sub judice.* There is one report[24] with 75 per cent good results, but the results of others have been considerably less impressive, and the recurrence rate is high.[33, 34] In general, a clear advantage of stereotaxic intervention over upper cervical root sections is not certain. Two of our dystonic patients with retrocollis and torticollis had considerable improvement, but we have had no experience with this as an isolated disorder in adulthood.

Intractable Pain

Aside from the dyskinesias the next important area explored stereotaxically is intractable pain. To appreciate the difficulties inherent in this a brief summary of our present knowledge of the anatomy of the pain tracts may be helpful.

After entering the spinal cord, fibers mediating light touch, pain and temperature cross and ascend in the opposite anterior quadrant. Some topographical orientation persists in the cord, but with passage to the brain stem identification of a discrete pain tract becomes increasingly difficult. Numerous fibers pass to the reticular formation of the brain stem and the cerebellum. The remainder terminate diffusely in the thalamus, concentrating among the more medially situated nuclei. A major relay projection to the cerebral cortex is doubtful.

Though the pain tracts may be selectively sectioned in the upper spinal cord (cordotomy), at higher levels this becomes increasingly difficult because of diffusion of the tract. Thalamic lesions including most of the medial thalamic nuclei have been successful in alleviating pain in about one-third of the patients, but the effect was lost within 6 months in most.[35-38]

Interruption of the association tracts between the thalamus and the medial frontal lobe through which is elaborated the emotional aspect of

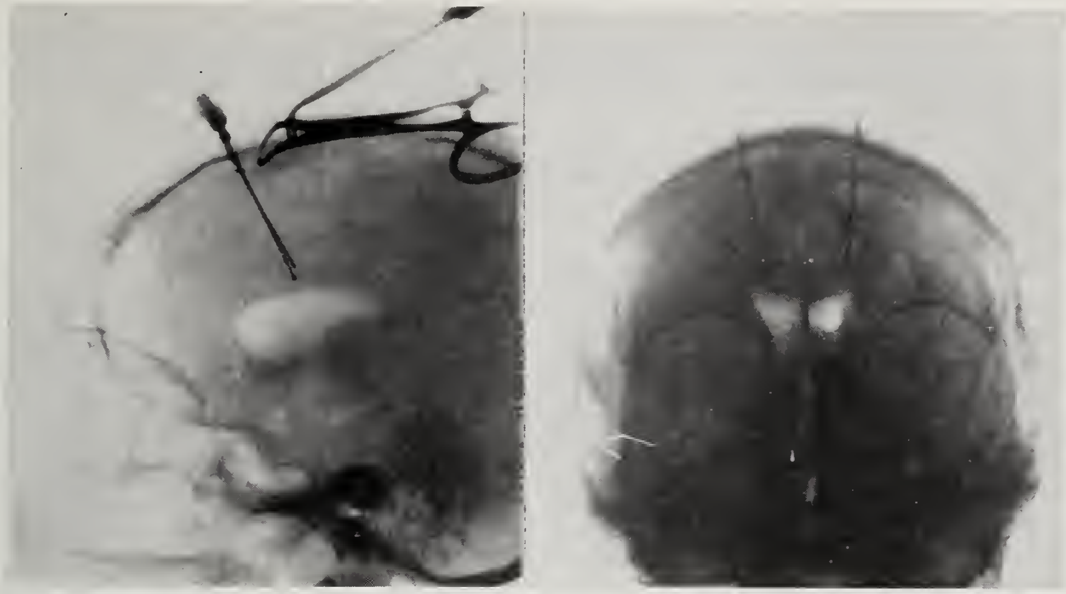


FIG. 5. Radiofrequency electrodes positioned in cingula bilaterally preparatory to creation of radiofrequency lesions.

pain has been attempted with lesions placed in the anterior thalamic nuclei representing end-stations for these tracts.[4] More recently interruption of these tracts adjacent to the corpus callosum has been tried (cingulumotomy[39]). There is increasing evidence that this may be a useful operation in pain problems with a strong emotional component and narcotic addiction. Our personal experience with this includes 2 patients, the first of whom had intractable pain following surgical section of the greater occipital nerve for occipital neuralgia. Following interruption of the cingula bilaterally with radiofrequency lesions (figure 5) there was transient improvement, but in follow-up this was not sustained. The second patient had intractable leg pain from diabetic neuropathy and required 100 mg. of Demerol® 3 to 4 times daily. Section of the cingula bilaterally in 1 stage produced considerable improvement in the patient's concern for her pain, and the Demerol could be abruptly discontinued.

Conclusions

In addition to its therapeutic value, stereotaxy has permitted intensive experimental exploration of the deeper structures of the human brain[40] and has been an impetus for increasing our knowledge of neuroanatomy and neurophysiology.[4, 41, 42] In addition, it has helped to unravel the enigmatic pathophysiology of the disorders of movement. There is a continuing search for new and better targets where smaller, more discrete lesions may serve the purpose with minimal chance of undesirable side-effects.[30, 43, 44] Though the best therapeutic results have been in the dyskinesias, there is considerable hope for a broad range of application in a variety of clinical problems.

References

1. Zervas, N. T.: Radiofrequency hypophysectomy. Proc. Second International Symposium on Stereoencephalotomy, held in Copenhagen, August 28, 1965.
2. Rand, R. W.: Surgical pathology of cryohypophysectomy. Ibid.
3. Knight, G.: J. Neurol. Neurosurg. Psychiat., 1965, **28**, 304.
4. Spiegel, E. A., and Wycis, H. T.: Stereoencephalotomy. Part II. Clinical and Physiological Applications. New York: Grune, 1962.
5. Kalyanaraman, S., and Gillingham, F. J.: J. Neurosurg., 1964, **21**, 854.
6. Cooper, I. S., and Stellar, S.: Ibid., 1963, **20**, 921.
7. Riechert, T., and Mundinger, F.: Ibid., 1964, **21**, 358.
8. Guiot, G., and others: Sem. Hôp. Paris, 1960, **36**, 1134.
9. Mullan, S., and others: J. Neurosurg., 1965, **22**, 539.
10. Aronow, S.: Ibid., 1960, **17**, 431.
11. Cooper, I. S.: Ibid., 1962, **19**, 853.
12. Mark, V. H., and others: Science, 1961, **134**, 1520.
13. Blinderman, E. C., and Markham, C. H.: J. Neurosurg., 1965, **23**, 38.
14. Coe, J., and Ommaya, A. K.: Ibid., 1964, **21**, 433.
15. Mark, V. H., and Erwin, F. R.: Occurrence of hemorrhage after localized brain cooling. Proc. Second International Symposium on Stereoencephalotomy (see ref. 1).

(Continued on page 174)

Myxedema with Pericardial Effusion

ARTHUR BURGERMAN, M.D., F.A.C.P.*

MYXEDEMA is not an uncommon disease. Its incidence is estimated to be 1 case in every 1,500 hospital admissions.[1] Adult myxedema occurs 5 times as frequently in females as in males and most frequently between the ages of 30 and 60 years. The term "hypothyroidism" indicates a state resulting from decreased thyroid hormone secretion. "Myxedema" is a commonly used term, but many patients may have a marked deficiency of thyroid hormone yet do not have discernible mucinous edema (myxedema). Either term is considered correct.

Clinically recognized myxedema does not occur until the capacity of the thyroid gland to manufacture hormone has been greatly reduced. In studying the effects of thyroidectomy on angina pectoris it was found that more than 95 per cent of the thyroid gland had to be removed before persistent myxedema was produced.[2]

The earliest mention of heart involvement in myxedema was made by Ord[3] in 1880. Myxedema heart disease was first described by Zondek[4] in 1918. He characterized it as follows. Before treatment with thyroid there is enlargement of both sides of the heart, slow indolent heart action with a normal blood pressure, and lowering of the P and T waves in the electrocardiogram. After treatment with thyroid there is a return of the heart to near normal size, more lively heart action, a more rapid pulse, unchanged blood pressure, and gradual return of the P and T waves to normal. Myxedema heart disease was first described in the United States by Fahr[5] in 1925.

The cardiac problems which arise most frequently in myxedema relate to enlargement of the heart, the question of whether or not heart failure is present, the presence of coronary atherosclerosis and its complications, and electrocardiographic abnormalities. These problems mainly relate to primary myxedema. Cardiac problems associated with pituitary myxedema are very rare.

Etiology

Myxedema may be primary, due to thyroid gland failure, or secondary to anterior pituitary gland failure. Primary hypothyroidism dating from birth results in cretinism. It occurs sporadically as a result of athyreosis or failure of the thyroid to develop normally, or endemically, as a result of maternal iodine deficiency or certain genetic enzyme deficiencies.

Primary myxedema may occur spontaneously, the most frequent cause being idiopathic atrophy of the thyroid gland. Such atrophy may be due to an auto-immune response to thyroglobulin or other thyroid antigens and therefore may be related to one form of thyroiditis, struma lymphomatosa (Hashimoto's struma). About 80 per cent of patients with spontaneous myxedema have thyroid autoantibodies. Low titers are also found in about 60 per cent of patients with thyrotoxicosis and about 30 per cent of patients with thyroid carcinoma.[1]

Myxedema may follow ablative procedures such as thyroidectomy, radioactive iodine therapy, and external irradiation. Excessive iodine ingestion over long periods may cause it in susceptible people. Goiters may result from substances in the diet such as turnips, kale and rutabaga. Occasionally drugs containing thiocyanate, p-amino salicylic acid, phenylbutazone and cobalt may cause goiters. These goiters may occasionally be associated with some degree of hypothyroidism.

Secondary myxedema is due to a deficiency of pituitary thyrotropic hormone and can occur at any age as a result of anterior pituitary failure. This failure may be due to atrophy, necrosis or tumor of the pituitary gland and is usually accompanied by adrenal and gonadal deficiency. There has been a recent report of a case of induced myxedema in a previously euthyroid patient when thyroid extract was discontinued after several years of ingestion.[6] The author postulated that prolonged exogenous thyroid can cause permanent suppression of thyrotropic hormone. Temporary suppression of thyroid gland function after cessation of thyroid ingestion is a common occurrence, but permanent myxedema in this situation must be very rare, if it occurs at all.

---

* From the Department of Internal Medicine, Yater Clinic, Washington, D. C. 20036.

Pathologic Features

A decrease in thyroid hormone causes a decrease in all body metabolic functions. In its absence protein, electrolytes and water accumulate in the extracellular spaces. In myxedema there is an extracellular mucinous substance in the dermis and other connective tissues. This substance is probably composed of acid polysaccharides, chondroitin, sulfuric acid and hyaluronic acid, mixed with or combined in some forms with proteins.[7]

The mortality in myxedema is low, and autopsy experience is not great. Postmortem examination of the heart frequently reveals a mild to moderate pericardial effusion. The myocardium is pale, soft and flabby. Its chambers tend to be dilated, and there may be a slight increase in the thickness of the walls due to pseudohypertrophy. Microscopic studies show swelling of the myocardial fibers, with separation by an accumulation of mucinous interstitial fluid, loss of striation, branching, pyknotic nuclei, and irregular staining with some replacement of the sarcoplasm by a basophilic material.[8, 9] Thickening of the capillary basement membranes and myocardial fibrosis may also be present.

Physiologic Considerations

The decreased demand for energy exchange in myxedema reduces the demand for the supply of blood. Graettinger and co-workers[10] have shown that patients with myxedema have a low resting cardiac output which, unlike that of patients with congestive heart failure, increases normally with exercise and is associated with a normal decrease in peripheral vascular resistance. They also found that the arteriovenous oxygen difference is usually normal and right atrial pressure normal or only slightly increased. Ellis and associates[11] have shown that blood flow in patients with myxedema may be decreased out of proportion to the lowered oxygen needs of the body. Frequently the pulse rate, and occasionally the pulse pressure are decreased. The blood pressure usually is normal.

Patients with long-standing myxedema tend to accumulate fluid in the serosal cavities, but congestive heart failure is rare in the absence of other forms of heart disease. Pericardial effusion, pleural effusion, and ascites are not uncommon in patients with myxedema. The mechanism of production of these effusions is not known. Increased capillary permeability may be a factor. Lange,[12] using a photofluorescein method, demonstrated increased capillary permeability in patients with myxedema which reverted to normal with thyroid treatment. Effusions in cases of myxedema usually have a high protein content, which is compatible with an increase in capillary permeability. The studies of Aikawa[13] and Watson and co-workers[14] suggest that an osmotically active macromolecular substance such as hyaluronic acid may be responsible for the accumulation of serous fluids.

Patients with myxedema may have several abnormalities of renal function which are usually not clinically significant. The glomerular filtration rate and renal plasma flow may be decreased. The maximal tubular capacity for excretion of Diodrast® or para-aminohippurate may be decreased. The ability to excrete administered water is limited.[15, 16, 17] The mechanisms for the impaired water excretion are not entirely known. The decreased glomerular filtration rate may be a factor. Goldberg and Reivitch[17] believe that the impaired water excretion is due to the inability of patients with myxedema to adequately inhibit the secretion of antidiuretic hormone in response to plasma hypotonicity. Vogt[16] found that the impaired water excretion in primary myxedema was corrected by cortisone and ACTH prior to its correction by thyroid therapy. He concluded that this was best explained by a sluggish release of ACTH in some cases of myxedema in response to a water load.

Clinical Manifestations

The manifestations of myxedema are related to the accumulation of water and protein throughout the body, and the decrease in turnover of carbohydrate, fat, protein, water and minerals. The disease has an insidious onset. Studies have shown that after extirpation of the thyroid gland or when a patient with athyreosis is in a state of euthyroidism and thyroid therapy is discontinued the rate of utilization of thyroxin proceeds at a fairly uniform rate and frank myxedema begins to appear in 40 days and is full-blown in 80 days.[2]

The initial symptoms vary. Decreased sweating and sensitivity to cold are usually early symptoms. Drowsiness and slowing of mental and physical activity appear, soon followed by lack of energy and puffiness of the skin. Periorbital puffiness is often particularly striking. The typical facies of patients with myxedema is characterized by a dull, uninterested expression and puffy eyelids, often with an alopecia of the outer one-third of the eyebrows. The skin of the face often exhibits creamy pallor and occasionally a peach-coloring over the malar prominences. The changes in coloring result from anemia combined with carotinemia. The skin elsewhere is dry and coarse. The subcutaneous tissue is indurated and doughy because of interstitial fluid of high protein content. The hair is brittle and dry, and frequently there is premature greying. There is swelling of the tongue and larynx and a halting, slurred, hoarse speech. The hoarseness may be due to edema of the vagus nerve or its nucleus and edema of the cricothyroid muscle.[18]

Patients with myxedema may develop constipation, constant rhinorrhea, deafness, dyspnea, and frank edema. There may be increased capillary permeability as evidenced by susceptibility to bruising. Women with myxedema during their fertile years often note prolonged menses. Less commonly there may be arthralgia, symptoms suggestive of peripheral neuropathy, signs and symptoms of cerebellar disturbance, and muscular weakness or myotonia.[1] Psychosis ("myxedema madness") is occasionally seen.

A very instructive and picturesque description of myxedema has been written by Asher[19]: "If you have known her for some years but have not seen her lately, you may have difficulty in recognizing her. When you do you are struck by the change—she looks different and she looks older than you expected. She moves and talks more slowly, and she is wearing more clothes than usual. Her face looks bloated, her eyes are narrowed by the surrounding swelling of her face, and her hair is frowzy and scanty. She has clearly taken little interest in herself lately. Her voice has become deep and thick and sounds as if her nose were blocked; indeed you may first think she has a bad cold. Her skin has a waxy, parchment-like appearance. Her hair is very thin, and in severe cases there is partial baldness. If the condition is advanced and the doctor experienced, he will find himself muttering under his breath as she enters—'Ah! . . . Myxoedema!' "

Patients with myxedema may live for a great many years without treatment, finally developing coma, which is a serious and usually fatal complication. Some of the features of myxedema coma are related to respiratory depression and subsequent carbon dioxide narcosis. Very rarely the disease changes from myxedema to euthyroidism or thyrotoxicosis.[2]

Secondary myxedema may present a picture indistinguishable from primary myxedema. However, accumulation of subcutaneous fluid is usually less pronounced, and there is usually evidence of gonadal and adrenocortical deficiency out of proportion to that seen in primary myxedema. Serous effusions may be present in secondary myxedema but are much less common.[20]

The most common physical findings are those already mentioned, namely, the changes in facial appearance, skin, hair, and tongue. The blood pressure is usually normal, but hypertension may occur. Occasionally hypotension is present. Hypotension is much more common in panhypopituitarism with secondary myxedema. The pulse rate may be decreased, but this is not a reliable finding. Thyroid tissue is rarely palpable except in chronic thyroiditis, endemic goiter, or goitrous cretinism. Skeletal growth is usually normal in adults but may be significantly retarded in children or adolescents. A very helpful and frequent finding is slowing of the relaxation time of the deep tendon reflexes. Evidence of severe ileus may be present, and intestinal obstruction due to myxedema has been reported.[21]

Cardiac manifestations. Patients with myxedema may present a variety of cardiac abnormalities of varying severity which have been referred to as "myxedema heart." Clinically this cardiac syndrome consists principally of bradycardia, decreased intensity of heart sounds, an enlarged heart, and electrocardiographic changes consisting usually of low voltage QRS complexes and isoelectric or inverted T waves. Disturbances in cardiac rhythm including complete heart block, paroxysmal atrial tachycardia, auricular fibrillation, and first and second degree heart block may occur and are usually successfully treated with thyroid medication.[22, 23, 24] The electrocardiographic abnormalities have been attributed to myxedema changes in the myocardium or to pericardial effusion or both.

About two-thirds of patients have an enlarged heart. Pericardial effusion is usually the major factor in cardiac enlargement.[25-29] Other factors include ventricular dilatation and interstitial edema of the myocardium. One of the earliest reports of proved pericardial effusion in myxedema was by Gordon[30] in 1929. Kern and co-workers[31] first suggested in 1949 that pericardial effusion was a "constant, early and major factor in the cardiac syndrome of hypothyroidism."

The accumulation of fluid in the pericardial sac is slow and usually well tolerated. Cardiac tamponade is rare. Pericardial effusion usually does not require special treatment such as paracentesis because it disappears with thyroid therapy.

Heart failure can occur, but it is rare and when present is almost always associated with some concurrent heart disease.[25, 32] Many of the signs of congestive heart failure may be found in myxedema, but there are several differences between myxedema and heart failure. In contradistinction to heart failure, the edema fluid is of high specific gravity, the venous pressure is normal, the blood volume is decreased, and digitalis therapy is not helpful. Thyroid therapy reverses all the abnormalities of myxedema heart disease.

Pleural and peritoneal effusions, in addition to pericardial effusions, are frequently found. These are complications of myxedema, and congestive heart failure as it is customarily understood rarely exists. These effusions may require a few to several months to disappear after initiation of thyroid therapy. The electrocardiogram may revert to normal in a few days after initiation of one of the more rapid acting thyroid preparations or require several months. Bell and Beck[33] reported that the electrocardiogram of a 61-year-old patient with myxedema returned to normal in 6 months after starting 1½ gr. of desiccated thyroid daily. The heart remained massive and did not return to normal size until 29 months after initiation of therapy.

Laboratory findings. Anemia is present in about 60 per cent of patients. It is usually mild. It may be hypochromic and respond to iron therapy. It may be normocytic or slightly macrocytic and respond to thyroid therapy but not to vitamin B_{12} therapy. Gastric achlorhydria may be present, and pernicious anemia may occur as a complication.[2] The white blood cell count is usually normal but occasionally may be slightly decreased. There is often a decrease in plasma volume and an increase in plasma protein. The spinal fluid protein may be increased in patients with profound myxedema.

In the plasma there is a decrease of protein-bound iodine and protein-bound magnesium and an increase in cholesterol and phospholipid. There tends to be an increase in carotene and a decrease in vitamin A. The urine tends to be scant and contain relatively few minerals. Albuminuria unassociated with kidney damage may be present.

Chest roentgenograms frequently reveal an increase in the size of the cardiac silhouette to the right and left. Fluoroscopic examination of the chest frequently reveals a decrease in the amplitude of cardiac contractions and in some cases bradycardia. The electrocardiographic changes have been discussed.

Common diagnostic tests. The basal metabolic rate in patients with fully developed myxedema is usually between minus 30 and minus 45. In a few patients with infections, heart disease, and other complicating conditions the basal metabolic rate may not be below minus 15. The serum cholesterol is frequently above 300 mg.

The protein-bound iodine determination is one of the most reliable tests in patients with myxedema. It is almost always below 3.5 mcg. About three-fourths of the patients have an uptake of radioactive iodine in the region of the thyroid gland of less than 20 per cent at 24 hours. There is also a decreased red blood cell uptake of radioactively-tagged triiodothyronine.

In patients with secondary myxedema the serum cholesterol is usually normal or near normal. The administration of 10 to 30 U.S.P. units of pituitary thyrotropic hormone over a 24- to 72-hour period is usually followed in 24 to 48 hours by a rise in the radioactive iodine uptake and protein-bound iodine. In addition, patients with secondary myxedema have laboratory evidence of gonadal and adrenocortical deficiency. Urinary excretion of pituitary gonadotropins, 17-ketosteroids and 17-hydroxycorticosteroids is decreased. Excretion of the latter 2 is significantly increased upon stimulation of these patients with adrenocorticotrophic hormone.

Therapy

The 4 commonly used types of thyroid preparations are desiccated thyroid, "purified" thyroglobulin, synthetic sodium L-thyroxin, and synthetic sodium L-triiodothyronine. The treatment of patients with myxedema heart disease is no different than for patients without cardiac involvement. Caution in therapy is important if cardiac changes are pronounced.

Desiccated thyroid is excellent therapy but has a few disadvantages. The brands available may vary to some extent in potency and biologic standardization. The preparation bought by the patient may be stale, with reduced effectiveness. Some brands are enteric-coated and are not absorbed well. Thyroglobulin has no definite advantage over desiccated thyroid. It is less impure and may cause less allergic reactions, but this is of no practical advantage. Synthetic sodium L-thyroxin is chemically pure and has consistent biologic properties. These 3 preparations are almost identical in the production and duration of calorigenic effects. A single dose produces no measurable effect on patients for 24 hours or more; thereafter its effect progressively increases until a maximal calorigenic effect is seen after 7 to 12 days. The effect then decreases but does not entirely disappear for weeks. The average half-life is about 12 days.

Triiodothyronine differs from the above 3 preparations in that it produces its maximal calorigenic effect within 36 hours and dissipates much faster with a half-life of about 7½ days.

The usual average daily maintenance dose for adult patients with myxedema is for desiccated thyroid 90 to 120 mg., for L-thyroxin 0.25 to 0.3 mg., and for L-triiodothyronine 0.075 to 0.1 mg. Thyroid therapy should not be started in patients with secondary myxedema until adrenocortical replacement therapy has been initiated. The initial dose of thyroid in these patients should be small and increased gradually.

The treatment of patients with myxedema who have cardiovascular disease should be initiated cautiously. The initial dosage of thyroid extract usually should not exceed 30 mg. daily. Patients with angina pectoris should be started on ¼ to ½ gr. of desiccated thyroid daily, and this can gradually be increased at intervals of 3 to 4 weeks. If coronary insufficiency is aggravated the dose should be decreased for a longer interval and increased again gradually. In many patients with anginal distress it is expedient to settle for maintenance therapy at a dosage representing incomplete replacement therapy even though evidence of residual hypothyroidism remains.

Patients with myxedema, like patients with Addison's disease, are extremely sensitive to many drugs, such as morphine, and to most stressful situations such as surgery. The shift from a myxedematous state to a euthyroid one produced by replacement therapy subjects the patient in general and the heart in particular to severe stress. Large doses of thyroid given to patients with myxedema heart disease may precipitate tachycardia, angina, left ventricular failure, and even myocardial infarction. These complications are generally due to the effect of a sudden increase in cardiac output on a heart adjusted to a low output.

The treatment of myxedema coma is usually unsuccessful, and the mortality rate is very high. Parenteral triiodothyronine should be given and artificial respiration used if carbon dioxide narcosis exists.

Illustrative Case

History. The patient, a 53-year-old married white woman, was first seen in July, 1959. She was referred by her family physician because of hoarseness and fatigue. In the spring of 1958 she noted intermittent hoarseness and the sensation of an "unclear head." She was seen by her family physician in May, 1958, and a symmetrically enlarged, rather firm goiter was detected. Thyroidectomy was performed that month, and the microscopic diagnosis was colloid goiter. The report from her family physician states that after surgery the hoarseness improved. In June, 1958 the patient was started on ½ gr. of desiccated thyroid (U.S.P.) daily. The reason for starting thyroid medication was not given. She did not return to her physician until November, 1958. At that time she complained of tiredness, mild hoarseness, generalized muscular aching, and puffiness of her skin. Thyroid extract was increased to 1 gr. daily. Thyroid function tests were not done.

During the next few months the patient felt better. In June, 1959 the hoarseness increased and became constant. Her head felt congested and she noted slight tinnitus bilaterally and an occipital headache occurring during the day, which lasted a few hours. In June, 1959 she discontinued the thyroid medication because of her headaches. She stated that the headaches disappeared after this, but mild fatigue recurred. When seen in July, 1959 the patient's main concern was her hoarseness.

Since the spring of 1958 the patient had noted mild anterior chest pain on exertion, which was relieved in a few minutes by rest. This distress did not radiate. For years she had noted slight exertional dyspnea which was not progressive. For about 15 months she had noted slight swelling of her face, hands and feet which had become worse in June, 1959 after discontinuing thyroid. There was no cough, orthopnea, or paroxysmal nocturnal dyspnea.

The patient had never noted any changes in her skin or hair or increased sensitivity to cold. Her appetite had been good and her weight unchanged. She had mild constipation and occasional lower abdominal pain for many years which were unchanged. She had not noted any muscle weakness nor any decrease in mental alertness. Her menses ceased at the age of 49.

The medical history was negative for any important illness. The only operation, other than the thyroidectomy, was an appendectomy in 1926. The patient's parents died in their eighties of "old age." Seven siblings were all living and well. No member of the family was known to have thyroid disease. There was no family history of any hereditary or familial diseases.

Physical examination. The blood pressure was 140/98 mm. The heart rate was 76 per minute. The temperature was 98.4°F orally. The patient was 67 inches tall and weighed 153 pounds. The voice was hoarse, and the mental reactions seemed somewhat slow. There was slight puffiness about the eyes, and the skin was rather dry and coarse. The tongue appeared normal. There was a hard nodule of about 1 cm. in diameter overlying the right thyroid cartilage. No other thyroid tissue was palpable. There was mild slowing of the relaxation phase of the deep tendon reflexes. There was no muscle weakness. Indirect laryngoscopy revealed a soft growth involving the whole length of the right vocal cord. The cords moved freely.

The left border of cardiac dullness was 1 cm. to the left of the midclavicular line. There was normal sinus rhythm. The heart sounds were of good quality. There were no murmurs. The lungs were clear. There was no distention of the neck veins. The liver was not enlarged. There was no edema of the extremities. The peripheral arteries pulsated normally.

Laboratory examinations. The hemoglobin was 11.1 Gm. The red blood cell count was 3,580,000 per cu. mm., and the white blood cell count 4,800 per cu. mm., with 66 per cent segmented neutrophils and 34 per cent lymphocytes. The hematocrit was 35. A urinalysis was normal. The blood sugar was 144 mg. per 100 ml. of blood 1 hour after eating. The sedimentation rate was 10. The serum Mazzini was negative. The serum cholesterol was 221 mg. The basal metabolic rate was minus 26 per cent. The protein-bound iodine was 4.4 mcg. (normal 3–7 mcg. in this laboratory).

A chest roentgenogram revealed moderate cardiac enlargement. The transverse diameter of the heart was 15.7 cm., representing a 16 per cent increase over the predicted normal for the patient's height and weight. The lungs appeared normal. Roentgenographic examination of the skull, esophagus, and colon was negative. An electrocardiogram revealed low voltage of many of the QRS complexes and T waves. There were no other electrocardiographic abnormalities.

A diagnosis of probable myxedema and probably coronary arteriosclerosis with angina pectoris was made. The normal protein-bound iodine and serum cholesterol and the absence of some of the characteristic symptoms of myxedema were considered due to the patient's taking thyroid extract until 1 month prior to her examination in July, 1959. The full-blown picture of myxedema did not have time to develop in this short interval. The patient had many physical findings suggestive of early myxedema. In addition, she had a growth on her vocal cord.

The patient was advised to resume desiccated thyroid (U.S.P.), 1 gr. daily, and to use nitroglycerin as a therapeutic trial for the exertional chest pain. She was referred back to her family physician. A biopsy specimen of the right vocal cord revealed an epidermoid carcinoma. On September 4, 1959 a right hemilaryngectomy and excision of the thyroid nodule were done. Microscopic study of the nodule revealed a benign adenoma. The patient tolerated surgery well.

The patient was not seen again until December, 1959, when she developed acute laryngeal obstruction and was admitted to the hospital. Direct laryngoscopy revealed a small pea-sized mass in the anterior commissure and subglottic edema. The mass was removed, and a tracheotomy was done. The microscopic diagnosis was granulation tissue.

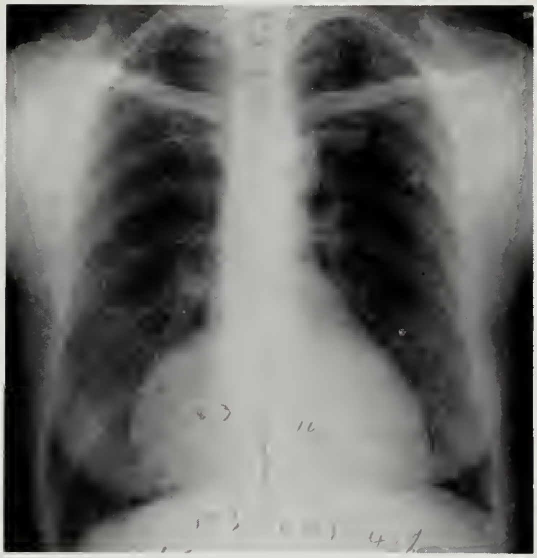


FIG. 1. Rather large pericardial effusion.

When examined following tracheotomy the patient presented the full-blown picture of myxedema. The face and eyelids were swollen, the tongue was thick, and the skin was very dry and coarse. The hair was very dry. The patient appeared apathetic. The relaxation phase of the deep tendon reflexes was markedly slowed. The extremities were puffy. The heart was greatly enlarged. The heart sounds were muffled. There was no distention of the neck veins. A paradoxical pulse was not present. The patient stated that she had stopped taking thyroid after her surgery in September, 1959. She did not believe that she needed it and had not consulted her family physician.

The venous pressure was 90.0 mm. saline. The protein-bound iodine was 1.8 mcg. The serum cholesterol was 389 mg. A chest roentgenogram revealed great cardiac enlargement (figure 1). With the patient recumbent the cardiac silhouette appeared more globular, helping to confirm the diagnosis of pericardial effusion.

The patient was started on ½ gr. of uncoated desiccated thyroid daily in December, 1959. In a few weeks she felt much better. The skin texture gradually returned to normal and the puffiness receded. The edema of the larynx cleared up, and in 3 weeks the tracheostomy was completely closed.

Three weeks after thyroid therapy was started the dose was increased to 1 gr. of desiccated thyroid daily. In January, 1960 the patient stated that she felt very well. The heart size remained the same, but other evidences of myxedema had disappeared. She stated that she had occasional episodes of anterior chest pain on exertion which were relieved quickly by rest. Otherwise she felt better than she had for years.

In February, 1960 the BMR was minus 14 per cent. The patient was clinically euthyroid. There was still no definite change in the heart size as determined by roentgenogram. There were no further complaints of chest pain. The thyroid dosage was increased to 2 gr. daily.

In May, 1960 the chest roentgenogram revealed a notable decrease in heart size. The patient felt well but had noted mild exertional dyspnea and more frequent anterior chest pain on exertion. She had never used nitroglycerin because of the short duration of the pain. The blood pressure was 130/90. Examination of the heart and lungs was negative. There was no edema or distention of the neck veins. The patient appeared euthyroid. Because of the anginal distress the dosage of thyroid was decreased to 1 gr. daily.

In February, 1961 the patient felt well and was clinically euthyroid. There was no dyspnea, and chest pain had not occurred in 3 or 4 months. The basal metabolic rate was minus 23 per cent. The chest roentgenogram still revealed moderate cardiac enlargement with a transverse diameter of 16.1 cm. The heart size had increased slightly since May, 1960, at which time the transverse cardiac diameter was 15.2 cm. In February, 1961 the dosage of thyroid was increased to 1½ gr. daily.

The patient was not seen for follow-up until November, 1962. She had felt well. She had not had any chest pain for over 1½ years. She had taken 1½ gr. of thyroid every day. Her blood pressure was 132/80, her weight 161½ pounds. She was clinically euthyroid. The entire physical examination was normal. A chest roentgenogram revealed a normal heart size (figure 2). The transverse diameter was 13.9 cm., which was normal for the patient's height and weight. She was advised to continue 1½ gr. of thyroid daily.

The initial electrocardiogram in July, 1959 revealed low voltage of the QRS complexes and T waves. One in February, 1961 revealed increased voltage of many QRS complexes and all of the T waves. At this time the patient was taking 1 gr. of thyroid daily, and the basal metabolic rate was minus 23.

Discussion

This patient apparently had myxedema when she first consulted her family physician in the spring of 1958. Thyroid therapy relieved her symptoms, but she discontinued its usage about 1 month before being seen in July, 1959. At that time the characteristic picture did not have time to develop, but many suggestive features were present. The hoarseness was thought to be a symptom of myxedema, but the finding of carcinoma of the larynx was unexpected. This case illustrates the need for laryngoscopic examination in all patients with hoarseness.

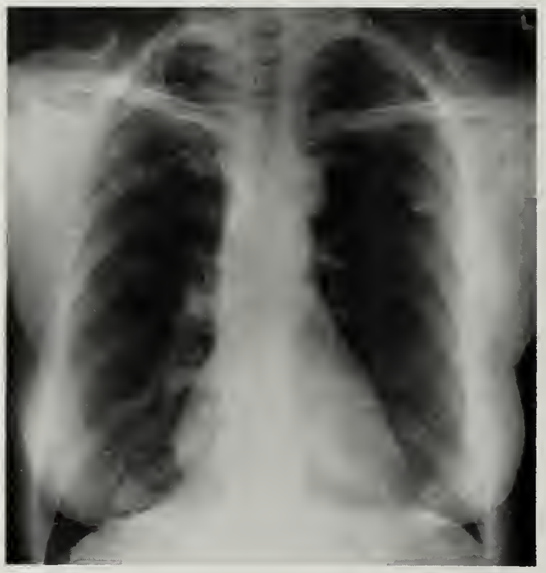


FIG. 2. Normal heart size after several months of therapy.

Thyroid medication was resumed, and the patient tolerated hemilaryngectomy well. She discontinued the thyroid and developed rather severe myxedema with laryngeal edema and rather marked pericardial effusion. The pericardial effusion was still present, although to a lesser degree, 14 months after continuous thyroid medication. The electrocardiogram improved considerably during this time.

Perhaps the pericardial effusion would have disappeared and the heart size returned to normal in a much shorter time if the patient had been given larger doses of thyroid. The patient had chest distress which was very suggestive of angina pectoris. Therefore, ½ gr. of desiccated thyroid was initially given, and the dosage was gradually increased to 2 gr. daily. After 3 months on this dosage the heart size decreased considerably, but there was an increase in anginal distress. Thyroid medication was decreased to 1 gr. daily and angina soon stopped. However, 9 months later the heart size had not decreased any further. The dose was then increased to 1½ gr. daily. The patient was not seen again for over 1½ years, at which time her heart size was normal and there had not been any recurrence of angina.

Caution is important in treating myxedematous patients with coronary artery disease. Myocardial infarction occurring during replacement therapy is not uncommon. Berman[26] studied 37 patients with myxedema in a Veterans Hospital. Six patients developed angina following thyroid therapy, and an additional 5 had myocardial infarctions during therapy. Keating and coworkers[25] reviewed the records of 1,503 patients with myxedema. Thirty-five patients developed evidence of coronary insufficiency during therapy, and 6 of these developed myocardial infarctions within 1 year after the start of therapy.

The relationship of myxedema to atherosclerosis is at present an unsolved question. The frequent occurrence of hypercholesterolemia in patients with myxedema could conceivably lead to or accelerate the development of atherosclerosis. However, the studies of Baker and Hamilton[34] and Blumgart and associates[35] indicate that myxedema probably is not an important etiologic factor in atherosclerosis.

Summary

Patients with myxedema frequently have cardiac abnormalities which have been referred to as myxedema heart disease. The most common cardiac manifestations in these patients are decreased intensity of heart sounds, an enlarged heart, and electrocardiographic changes consisting of low voltage QRS complexes and iso-electric or inverted T waves. Pericardial effusion is the major factor in cardiac enlargement in patients with myxedema. Congestive heart failure due to myxedema is rare. When present it is almost always associated with some concurrent heart disease. Thyroid therapy reverses all the abnormalities of myxedema heart disease. Pericardial effusion may persist for several months after initiation of therapy.

A case has been presented of rather profound myxedema with marked pericardial effusion. One of the patient's major presenting complaints was hoarseness which on initial examination was thought to be due to myxedema. However, a carcinoma of the larynx was also present. The pericardial effusion persisted for over 14 months after initiation of thyroid therapy. Thyroid was started in a small dose because of the presence of probable angina pectoris. After gradually increasing the dosage to 2 gr. daily there was considerable decrease in the size of the heart and improvement in the electrocardiogram. However, the angina increased, and the thyroid dose was decreased to 1 gr. daily. After 9 months on this dosage there was no further decrease in heart size and the basal metabolic rate had decreased from minus 23 to minus 14 per cent. Desiccated thyroid was increased to 1½ gr. daily, and the heart size returned to normal.

References

1. Hill, S. R., Jr., and Selenkow, H. A., in Harrison, T. R., edited by: Principles of Internal Medicine. New York: McGraw-Hill, 1962, chap. 66.
2. Williams, R. H., and Blake, J. L., in Williams, R. H., edited by: Textbook of Endocrinology. Philadelphia: Saunders, 1962, chap. 4.
3. Ord, W. M.: Trans. Clin. Soc. London, 1880, **13,** 15.
4. Zondek, H.: Munchen Med. Wschr., 1918, **65,** 1180.
5. Fahr, G.: J.A.M.A., 1925, **84,** 345.
6. Ree, M. J.: Brit. Med. J., 1962, no. 5297, 97.
7. Gabrilove, J. L., Alvarez, A. S., and Churg, J.: J. Clin. Endocr., 1960, **20,** 825.
8. LaDue, J. S.: Ann. Intern. Med., 1943, **18,** 332.
9. Brewer, D. B.: J. Path. Bact., 1951, **63,** 503.
10. Graettinger, J. S., and others: J. Clin. Invest., 1958, **37,** 502.
11. Ellis, L. B., and others: Amer. Heart J., 1952, **43,** 341.
12. Lange, K.: Amer. J. Med. Sci., 1944, **208,** 5.
13. Aikawa, J. K.: Ann. Intern. Med., 1956, **44,** 30.
14. Watson, C. J., Craig, D., and Beach, N.: New Internat. Clin., 1941, **4,** 176.
15. Papper, S., and Lancestremere, R. G.: J. Chronic Dis., 1961, **14,** 495.
16. Vogt, J. H.: Acta Endocr. (Kobenhavn), 1960, **35,** 277.
17. Goldberg, M., and Reivitch, M.: Ann. Intern. Med., 1962, **56,** 120.
18. Fiarra, B. J.: Arch. Otolaryng. (Chicago), 1960, **72,** 75.
19. Asher, R.: Postgrad. Med. J., 1960, **36,** 471.
20. Serpe, S. J., and Grace, W. J.: Dis. Chest, 1962, **41,** 351.
21. Haley, H. B., Leigh, C., Bronsky, D., and Waldstein, S. S.: Arch. Surg. (Chicago), 1962, **85,** 328.
22. Lee, J. K., and Lewis, J. A.: Brit. Heart J., 1962, **24,** 253.
23. Schantz, E. T., and Dubbs, A. W.: Amer. Heart J., 1951, **41,** 613.
24. Ibrahim, M.: Lancet, 1957, **77,** 114.
25. Keating, F. R., Jr., Parkin, T. W., Selby, J. B., and Dickinson, L. S.: Progr. Cardiov. Dis., 1961, **3,** 364.
26. Berman, D. A.: J. Lancet, 1960, **80,** 300.
27. Levine, H. J., and Levine, S. A.: Amer. Heart J., 1960, **60,** 456.

(*Continued on page 174*)

Hyposensitization and the Allergic Patient

RAYMOND T. BENACK, M.D.*

CONDITIONS commonly associated with the allergic state have been recognized for centuries. However, it was not until 1911 that a form of therapy was developed which had potential merit in the treatment of the allergic patient. At that time Noon[1] introduced a program for the treatment of hay fever with the use of prophylactic immunization. Further impetus was given to this philosophy by Cooke[2] in 1915, when he reported his success in the treatment of hay fever through active immunization. Subsequently many reports have been published about the effectiveness of various pollen extracts, primarily aqueous preparations, in the use of hyposensitization in the allergic individual.

In 1958 Fuchs and Strauss[3] introduced an innovation in the therapeutic program for the allergic individual by the development and utilization of a water-insoluble, whole ragweed pollen complex as the basis for a hypoimmunization program. Also during this same period there had been a reëvaluation of the repository therapy in the treatment of allergic conditions.[4]

Throughout the rise of hypoimmunization as a therapeutic program for the allergic patient, there have been many studies of questionable value in the support of the use of this technique. Occasionally reports have been published which would substantially support or refute some hyposensitization programs.[5, 6] In most instances the evaluation of any hyposensitization procedure has failed in its goal to evaluate a controlled population while keeping its variables as few as possible. The nature of the allergic process frequently prevents this possibility. The results of a study may be affected by the opinions of the physician. The allergist who firmly believes that hyposensitization is an effective program in the treatment of allergies might consider the results more favorable when evaluating the individual patient over a span of time. Another physician, not convinced that hyposensitization is effective, might not have the same impression at the end of the same period of time. The allergist seeing the patient only sporadically may have different opinions than the general practitioner who sees the patient weekly or more frequently.

During any one period of evaluation of the effectiveness of therapy pollen counts can vary from day to day, month to month, or year to year. Individual patients vary greatly in their opinion of the severity of their symptoms. This makes it relatively impossible to match patients with equal severity of disease states when only arbitrary subjective standards are available. The evaluation of the success of any therapeutic program is dependent upon very equivocal and often debatable criteria.

However, when all these factors are considered the results of a study can give some insight into the potential effectiveness of a therapeutic program to a particular investigator.

The success of any hyposensitization procedure must be evaluated in terms of the individual patient. It should be determined whether the program has been a useful mechanism in the prevention of the progression or recurrence of the disease in that individual: whether it reduces the complications of that disease; whether other equally effective therapeutic programs are available; and whether the program has any potential hazard to the patient.

Allergic States

The average practicing physician can often diagnose the characteristic symptoms of hay fever by the nasal congestion, red, watery eyes, and frequent sneezing. He may be equally competent to correlate hay-fever symptoms with particular pollens such as grass, trees, or ragweed, provided he is familiar with the pollinating seasons of these plants. However, he may be confused when he sees a patient with hay-fever symptoms during a period of pollination of a lesser known substance such as English plantain.

The greater diagnostic problem exists in the patient who has allergic symptoms without seasonal variations but may only have periods of increased severity. It is only after extensive questioning that substances such as dust or mold

---

* 4115 Colie Drive, Wheaton, Md. 20906.

may be implicated as the possible cause. Another difficult condition which may have an allergic background is the child with a chronic running nose, who is irritable, and fails to gain weight. Frequently such a child's symptoms are caused by perennial allergic rhinitis. The child may frequently be well during the summer months, being active, playful and congenial; but as soon as the family turns on the heating system for the winter he reverts to a constant sniffle, running nose, dry, nonproductive cough, and sore throats, and becomes irritable and shows a decrease in the quality of his school work. This type of child often needs treatment in order to resume any resemblance of a normal life. Many of these children have undergone tonsillectomy and adenoidectomy only to develop a recurrence of the same symptoms shortly after surgery.

The adult state of perennial allergic rhinitis is characterized by a chronic nasal congestion, displaying on physical examination nasal polyps, and swollen greyish-red nasal turbinates, often with occlusion of the nasal passages. Almost 99 per cent of nasal polyps are allergic in origin. Frequently these patients may have had previous surgery for removal of the nasal polyps, but failure to receive treatment for the allergy had caused a recurrence of the nasal polyps.

Patients with recurrent sinusitis who have the onset of their symptoms with a particular time of year or in a particular environment should be evaluated for a possible allergic origin of their sinusitis. It is not unusual for these patients to have attacks of sinusitis at the same times that other patients have suffered acute exacerbations of their asthma.

Increased emphasis has been placed on the progressive rise of the prevalence of respiratory diseases and irreversible lung conditions, such as emphysema. The alert physician might detect the early signs of such cases in the patient with intermittent, dry, nonproductive cough, and increased shortness of breath which were attributed to smoking but in reality may be a subclinical asthmatic state. Pulmonary studies on these patients will often show a delay in timed vital capacity which is improved after the inhalation of a bronchial dilating agent. Although cigarettes may aggravate the bronchospasm, it is usually the underlying allergy that makes this patient more sensitive to the cigarette. A patient without any such allergy will often have no cough when smoking.

Episodes of abdominal pain with excess gas formation or intermittent constipation and diarrhea, occurring in a patient lacking any emotional stress and who fails to respond to the normal drug therapy, may have as their origin some food or inhalant allergy. Serious consideration of the possibility of intestinal allergy must be given to the individual in whom there is no definite evidence of disease and in whom the symptoms seem to be related to a particular season, environment, or food ingestion.

Therefore, allergies can be a possible cause for headaches, ear, nose and throat difficulties, respiratory difficulties, gastrointestinal symptoms, in some instances arthritis, and various skin conditions, such as poison ivy, angioneurotic edema, urticaria, eczema, etc. The effective control of these symptoms is dependent upon the early diagnosis and prompt institution of therapy. Too frequently an asthmatic child is only diagnosed after recurrent episodes which were previously called bronchitis or pneumonitis, when in reality they were brief asthmatic episodes. Failure to recognize the allergic individual and to institute the necessary therapeutic measures may result in irreversible damage to a patient's health.

Hypoimmunization Therapy

To be discussed here will be a therapeutic program utilized in a small population of people in whom the allergic symptoms were no longer controlled by drugs except for steroids and in whom it was necessary to seek out a more effective mechanism to control their symptoms. The questions to be answered are: Will a program of hyposensitization of the allergic individual, utilizing an alum-precipitated material, effectively reduce or control the allergic symptoms in these patients? To what degree is this program effective? For which patients is this program most effective? Finally, how might the program be useful in other allergic patients?

The results obtained will not be the final answer to the whole question of hyposensitization, but they will give some insight into the question of the need for hyposensitization.

There are an estimated 10 to 15 million individuals in the United States who suffer from some form of allergy. Many have never been diagnosed. Others have been diagnosed but not treated. Some have been treated with excellent results, but many have had ineffective and inadequate treatment. Therefore, any therapeutic program which is evaluated must also be considered as to whether such a program is just another regimen in the armamentarium of the allergist, having no advantage over already existing programs and possibly adding to the already confused picture of hyposensitization.

Not only does the allergist need effective mechanisms for the treatment of the allergic diseases, but also the referring physician needs reassurance that hyposensitization is an effective program for the treatment of the allergic individual. The average physician needs to have his faith reaffirmed in the therapeutic programs as currently undertaken by the allergist. This confidence in the allergists' programs must be conveyed by the physician to his patients. A physician's indifference toward the role of the allergist will only undermine the patient's confidence in the allergist and his recommended therapy.

For over 30 years hypoimmunization therapy with aqueous extracts of allergens has been utilized in the therapy of allergic conditions. The pros and cons of this form of therapy have been discussed throughout the literature.

It is difficult to ascertain whether a patient who is seen by an allergist, referred back to his private physician, and who receives from that doctor, or more probably his nurse, a specified amount of extract at weekly or twice weekly intervals, can benefit from this treatment. There is, in all probability, a psychologic element in that the patient believes that he is receiving something for his allergy and therefore should have fewer attacks. Injections of sterile water might be equally effective in some patients. It must be realized that the patient goes to a doctor's office, receives an injection, and pays a fee to receive this therapy. I am sure that the procedure contributes in some way to the patient's improvement. I am equally certain that the physician who maintains an indifferent attitude toward the effectiveness of hyposensitization can convey this indifferent attitude to his patient and thereby have more difficulty in controlling the allergic symptoms than a physician who believes that hyposensitization is an effective mechanism.

I believe that the physician who "works up" the patient, follows his patient at regular intervals, and gives the injections himself has greater success in the control of the allergic symptoms than the physician who sees the patient only once, prepares an extract, and sends it out. There are definite advantages in seeing the patient and adjusting the dosage, depending upon his reaction to previous injections.

In a brief study undertaken in an allergy clinic approximately 100 patients were followed for 2 years. During the initial 1-year period the patients were seen by interns, residents, or attending physicians and given an injection by the nurse and discharged. During the second 1-year period they were seen by the same physician and evaluated by that physician and given an injection by the physician. The comparison of the results during these 2 periods revealed that there was a significant improvement in the patients during the period in which they were seen and given injections by the same physician (table 1). It was noted that there was a reduction in the number of attacks of allergic symptoms and a reduction in the total amount of medication necessary to control them. There was also a greater variation in the amount of extract given to each patient in comparison to the previous 2 years when generally a fixed amount of extract was given (table 2). There were also fewer immediate, local or systemic reactions to the extract when given by the physician (table 3).

TABLE 1: Improvement in Patients When Given Injections by Physicians

CLASS	IMPROVED	UNCHANGED	WORSE	TOTAL
A	4	10	1	15
B	15	15	2	32
C	16	37	0	53
TOTAL	35	62	3	100

TABLE 2: Number of Patients in Whom Dosage Varied

Class A	11
Class B	15
Class C	26
TOTAL	52

There is the possibility that when the physician gave the injection himself the improved patient-physician relationship contributed to the patient's improvement. The use of increased and varying amounts of extracts depending on the needs of the patient might also have contributed to the improved condition. Regardless of the reason or reasons, the end-result was still the same, namely, the patient was better. Whether it is dependent upon the patient-physician relationship or the medication given, the ultimate aim of the program was to improve the patient and reduce his associated symptoms. Therefore, if the patient is improved under such a program, then that program is preferable.

TABLE 3: Reactions Occurring During 9,830 Injections

Reaction	Period I*	Period II†	Total
Immediate local	66	21	87
Delayed local	37	11	48
Immediate systemic	6	1	7
Delayed systemic	2	0	2
Total	111	33	144

* Nurse gave injection.

† Physician gave extract.

Materials and Methods

Thirty-four consecutive patients seen in private practice for the treatment of allergic conditions were selected for incorporation into the study (table 4). A complete history and physical examination was performed on the patients and skin-testing was carried out in accordance with the history and physical findings. Based on the severity of reactions to the skin tests and as correlated with the history, the patients were classified A, B and C. Class A were patients who responded with a marked skin reaction to an intradermal test of 10 P.N.U.* of the extract. Class B were patients who responded with a marked reaction to 100 P.N.U. of extract. Class C were patients who showed a marked reaction to 1,000 P.N.U. of extract. The patients were treated with an alum-precipitated, whole-aqueous extract (Allpyrol®). They were seen weekly for the first 2 months and at approximately 4-week intervals thereafter (table 5). A record was kept of immediate and delayed local and systemic reactions. Records were kept by the patient and the physician on the number and severity of attacks of their allergic symptoms. These would include episodes of sinusitis, hay fever, asthma, etc. Records were also kept on the number and frequency of antihistamines and/or steroids taken and whether there was a reduction in the dosage of the medication. A correlation with pollen counts was not feasible, since the pollen counts for the Metropolitan Washington, D. C. area are taken approximately 25 miles from the locale of the study.

TABLE 4: Allergic Conditions for Which Patients Were Treated with Alum-pyridine Extracts

Condition	Class A	Class B	Class C	Total
Sinusitis	1	2	4	7
Asthma	1	2	6	9
Hay fever	3	2	1	6
Perennial rhinitis	0	2	5	7
Multiple	0	3	2	5
Total	5	11	18	34

TABLE 5: Therapy Schedule

Injection	Class A	Class B	Class C
1	10	20	100
2	20	50	300
3	40	100	800
4	80	200	1500
5	150	500	3000
6	300	1000	5000
7	600	2000	10,000
8	1200	5000	10,000 or more
9	2500		

Results

Compared to previous experience with the use of aqueous extracts in the treatment of the allergic patient, the alum-precipitated extracts were more effective in the control of the symptoms of the allergic patient. No patient could be classified as a failure (tables 6 and 7). In all instances

TABLE 6: Degree of Improvement with Alum-pyridine-precipitated Extracts

Condition	Marked*	Moderate†	Mild‡	Unchanged
Sinusitis (7)	3	3	1	0
Asthma (9)	6	2	1	0
Hay fever (6)	6	0	0	0
Perennial rhinitis (7)	3	3	1	0
Multiple (5)	2	2	1	0
Totals	20	10	4	0

* No attacks and required no antihistamines or steroid.

† No severe attacks—required on occasion antihistamine.

‡ Occasional attacks—required antihistamines frequently and rarely steroids.

TABLE 7: Degree of Improvement by Class

Class	Marked	Moderate	Mild	Unchanged
A (5)	3	2	0	0
B (11)	8	3	1	0
C (18)	9	5	3	0
Total	20	10	4	0

---

* Protein nitrogen units.

the patients showed some improvement, characterized by a reduction in the dosage of antihistamines and/or steroids or in frequency of attacks. Nearly every patient with seasonal hay-fever symptoms showed excellent results. Those with asthma frequently had good results, although sporadic attacks of asthma did occur. Patients with perennial rhinitis and sinusitis were improved but did not show the degree of improvement seen in the seasonal hay-fever patients.

The characteristic pattern seen in the patient was a gradual improvement after the third or fourth injection until an optimum amount of allergen was given. After this dosage any further increase in the allergen was not associated with a similar improvement in the patient. However, a reduction in the dosage did precipitate an increase in the frequency of their allergic complaints. In some instances very high doses of the extracts could be given without any serious side-effects.

In instances in which there were moderately severe local reactions or mild systemic reactions the most common antigen responsible for the reaction was grass pollen (table 8). However, local and systemic reactions have also been known to occur with dust, ragweed, plantain, and mold extracts. The frequency of reactions to these, however, was extremely rare. The cases of local reactions were associated with a single injection of greater than 1 c.c. of extract or where the needle length was greater than 3/8 inch.

TABLE 8: Reactions During 820 Injections

Type	Grass	Ragweed	Trees	Dust	Plantain	Molds	Total
Immediate local	0	0	0	0	0	0	0
Delayed local	2	1	0	1	0	0	4
Immediate systemic	0	0	0	0	0	0	0
Delayed systemic	1	0	0	0	0	0	1
Total	3	1	0	1	0	0	5

The chief advantage of using the alum-precipitated extracts was the fact that the extracts could be given at longer intervals and that high doses could be received at each injection. Patients were given progressively increasing doses of the extract at weekly intervals until reaching the maintenance dosage, after which they were seen at approximately 1-month intervals (table 5). This dosage varied from patient to patient but usually was determined during the initial period of therapy. The therapy was well tolerated by children because of the fewer number of injections and the relative lack of discomfort at the site of injection.

Discussion

With due consideration to the fact that a controlled study in the use of hyposensitization in the treatment of allergic conditions is difficult, an evaluation of the effectiveness of such therapy can be accomplished if the clinical status of the patient and his degree of improvement with the therapy are considered. The criteria used in this study included the reduction of the frequency and severity of allergic symptoms, improvement in general well-being, and decrease in the need for supplemental medication.

Using these criteria 34 allergic patients seen in private practice were evaluated. The patients suffered from a variety of allergic conditions including sinusitis, asthma, hay fever, and perennial rhinitis. The patients received an alum-pyridine-precipitated aqueous extract of various pollens in a dosage schedule described previously. It was found that no patient was classified as a failure under this therapeutic regimen. Those patients with seasonal hay-fever symptoms most frequently obtained complete remission of symptoms. Patients with perennial rhinitis and asthma showed great improvement characterized by a reduction in the amount of supplemental medication necessary and a decrease in their frequency of attacks or symptoms, but their improvement was not to the degree seen in seasonal hay fever. Those with allergic sinusitis had obtained the least improvement but still were significantly better than prior to therapy. In this group of patients other associated factors had to be considered. Many of the patients who suffered sinusitis for long periods of time had nasal polyps with the frequent complication of a bacterial infection. The improvement in their general overall condition was probably due also to the control of the allergic component of the sinusitis. However, those changes due to the chronic irritation of the sinus and the nasal polyps could not be reversed with hyposensitization. These abnormalities prompted an early return of their sinus symptoms, particularly in association with obstruction of sinus drainage or infection of the sinuses.

One important aspect of the study was the fact that patients who exhibited a high degree of sensitivity to extracts on testing and in whom contact with a low concentration of the allergen precipitated symptoms were able to tolerate higher doses of the extract than they might have been able to tolerate with the use of aqueous preparations. The relatively low incidence of severe systemic reactions makes this therapy more beneficial than the use of aqueous extracts which have frequently been associated with severe systemic reactions. A further reduction in local and systemic reactions was accomplished by giving no greater than 1 c.c. of the extract in one location and avoiding intramuscular injection of the extracts.

The occurrence of systemic and local reactions to the extract confirms that material does have an allergenic component. A few patients were given extracts to which they were not allergic. Doses as high as 25 to 40 thousand units had been given without any evidence of local or systemic reactions. In part this confirms specificity of the extract to precipitate reactions in the allergic individual. When patients were given an extract to which they were not allergic and given no other extracts they displayed no improvement in their symptoms. Therefore, the treatment of the allergic individual should include all those substances which their history, physical examination, and skin tests indicate as possible allergens and which cannot be avoided.

Alum-pyridine-precipitated extracts appear to be more effective in the care of the allergic individual than aqueous preparation because nearly all patients improved with them. They had relatively few local and systemic reactions, and the patients were able to tolerate higher doses with fewer injections and longer intervals between injections.

Summary

There is definite evidence that the use of hyposensitization can reduce the severity of allergic symptoms in the allergic individual. It would be logical to assume that if there is a reduction in the severity or frequency of allergic attacks there would be a reduction in the complications from such allergies. If the ultimate goal of the treatment of the allergic individual is not only to control his allergies but also to prevent the development of the complications of these allergies, the most practical way to accomplish this control would be to use a method of hyposensitization which would reduce the frequency of the attacks and also reduce the need for supplemental medication. The use of alum-precipitated extracts seems to have provided a mechanism whereby this can be accomplished.

The allergic individual suffers from a chronic disease which has its exacerbations and remissions. Any chronic disease not only must incorporate therapy for the acute episodes but also for long-term therapy. It also requires the early diagnosis of the disease, prompt institution of therapy, and the effective use of long-term therapy. The allergic individual requires the early diagnosis of his allergic condition, the institution of suitable therapy for the prompt control of his symptoms, and the effective utilization of a suitable hyposensitization program. Only through the use of these 3 factors can prolonged relief for the allergic individual be obtained. In this study it has been demonstrated that the alum-pyridine-precipitated extracts have proven beneficial in the long-term control of the allergic individual.

References

1. Noon, L.: Prophylactic inoculation against hay fever. Lancet, 1911, **1**, 1572.
2. Cooke, R. A.: Treatment of hay fever by active immunization. Laryngoscope, 1915, **25**, 108.
3. Fuchs, A. M., and Strauss, M. B.: Clinical evaluation and the preparation and standardization of suspensions of new water-insoluble whole ragweed pollen complex. J. Allerg., 1959, **30**, 66.
4. Editorial: Repository injection for treatment of pollinosis. New Eng. J. Med., 1961, **264**, 1369.
5. Fontana, V. J., Salanitro, A. S., Wolfe, H. I., and Moreno, F.: Bacterial vaccine and infectious asthma. J.A.M.A., 1965, **193**, 123.
6. Lowell, F. C., and Franklin, W.: Double-blind study of effectiveness and specificity of injection therapy in ragweed hayfever. New Eng. J. Med., 1965, **273**, 675.

Medical Research and Education—Matrix and Metamorphosis*

HAROLD STEVENS, PH.D., M.D.†

OUR COUNTRY has been enriched by your stay with us and we are eager to learn what you have gained by your experience with us. Your visit has been too short for you to attain a full and representative sample of our scientific community, but it has been long enough to observe our weaknesses and defects which, of course, we should like to hide. But since we cannot, we hope your observations and suggestions will help us correct them.

Also, since some of our problems are similar to yours, we can profitably share our experience; for example, you have undoubtedly heard of our doctor shortage which to many of you, in contrast to the physician scarcity in your native country, must seem absurd. But in the sense that the demand here is greater than the supply, there is a vast discrepancy. In fact, we have a shortage of doctors everywhere in this country except on television.

As stated, since your time here has been short, only a limited segment of our medical scene could be encompassed. You may have formed a too bright or a too pessimistic view, which in either case should be moderated. At the risk of being denounced subversive, I should like to expose our native crisis in medical education and research from a historical perspective. This unconventional analysis may not match the view of my fellow Americans, but in America we are not expected to think alike.

In my opinion, for example, medical investigators and clinicians in the United States are carrying on a foolish "love affair" with technological inventions and with elegant tests and expensive apparatus when they should be wooing science with a greater exercise of their minds. You have heard this before and probably have been astonished to observe that the same American doctor who so volubly deplores this practice does nothing to correct it. The reason is that he is a helpless victim of a historical process beyond his control. In 1910 the Flexner Report created a desperate drive to enthrone science in the halls of the medical arts and to invest medical practice and research with the shiny armor and hardware which now has become for the successful medical school the recognized symbol of academic achievement and prestige. This worshipful posture toward science has been communicated to 2 generations of medical students. As a result, today's physicians, understandably, infer that all clinical and laboratory research requires mammoth machines and elaborate equipment. This philosophy, indigenous to our country, tends toward intellectual sloth. For this reason our truly able teachers and investigators remind their students of Claude Bernard's observation: "If you can't think, use apparatus."

But not all research in this country nor elsewhere takes place in elaborate institutions, and I hope you have seen examples of sophisticated research without fancy equipment. The fact is that there are some questions that can be answered only by work in the field, which includes the clinic. The fact that a piece of work is done in the field does not make it less scientific; the fact that a piece of work is done in the laboratory and with elaborate apparatus does not make it good science.[1]

The lavish support by our government agencies of research, particularly so-called laboratory research, helps to foster this philosophy and has in fact, as you know, inundated selected medical schools with money which overflows more or less surreptitiously into teacher subsidy. But the pressure on the teacher-investigator to publish in order to procure more money, to publish more research data and to procure more money, continues relentlessly.

I suggest that you not copy this American technique in your native country, although we should not be blamed for being the originators of it. Our National Institutes of Health were antedated by the French Academy of Science, founded 300 years ago by Jean Baptiste Colbert, Minister to Louis XIV. Colbert was rich and ruthless and grew more so as his absolute power absolutely corrupted.

---

* Address delivered to the International Medical Scholars at the Fourth Annual Meeting at Airlie House, Warrenton, Va., in April, 1965.

† Professor of Neurology, George Washington University School of Medicine, Washington, D. C.

At any rate, more open and direct subsidy of universities is considered by most candid educators to be more efficient and healthier for the teacher, the scientist, and for the administrator. For it is the university setting that provides the optimal atmosphere for investigative activity in this country and probably in yours, if for no other reason than that the university can best accommodate to and control the inexorable growth and inevitable evils of medical specialization.

Medical specialization, another world-wide problem, continues at an accelerated pace in the United States and substantially influences the design and direction of research programs, of institutes, and of people. It poses challenging problems in communication which grow harder to solve as knowledge explodes and terminology becomes less universally understood. Yet, specialization remains an inseparable accomplice of progress. But, as J. Robert Oppenheimer[2] states, "It is full of dangers and it is cruelly wasteful since so much that is beautiful and enlightening is cut off from most of the world. Thus it is proper to the role of the scientist that he not merely find new truth and communicate it to his fellows, but that he teach, that he try to bring the most honest and intelligible account of new knowledge to all who will try to learn. This is one reason—it is a decisive organic reason—why scientists belong in universities. It is one reason why the patronage of science by and through universities is its most proper form, for it is here in teaching and the association of scholars and in the friendship of teachers and taught, of men who, by profession, must themselves be both teachers and taught, that the narrowness of scientific life can best be moderated and that the analogues, insights, and harmonies of scientific discovery can find their way into the wider life of man."

Some of you, like some of us, may not find it possible to work within the framework of the university. All is not lost, since in the United States and probably elsewhere a satisfactory although less ideal milieu for excellent teaching, research, and patient care can be provided (1) in a community hospital, and (2) in group practice.[3, 4]

Studies in this country, which are applicable anywhere in the world, have demonstrated broad research opportunities in a non-university community hospital. Foraker,[5] in a pilot project, has demonstrated that research instruction and experience can be combined with nonresearch training in a community hospital. A similar project by Martin and Jeghers[6] demonstrated the practicality of providing clinical investigation as an integral feature of medical residency training in any progressive hospital. Internal and external forces are enlarging the scope and influence of the nonteaching community hospital. In this country only 15 per cent of the hospitals have interns and residents, and only half of this 15 per cent provide clerkship instruction for medical students. A national program of postgraduate medical education, which would use as its classrooms the hundreds of community hospitals where physicians gather every day, is probably inevitable,[7] and utilization of the non-university community hospital is a plausible remedy for the lack of adequate facilities and faculty in some schools for teaching medical students, particularly in family care.[8] But chairmen of medical school departments, not known for their tolerance to this notion, must yield some of their autonomy and authority to community hospital staffs which, in general, are regarded as less scientific in their approach to disease mechanism and, therefore, are inferior teachers.[9] Here, as elsewhere, individual freedom and prerogatives must be submerged for broader objectives.

The education and research facilities of the community hospital are changing and, correspondingly, the role and responsibility of the private physician have been markedly altered. This has evolved through outside and often unwelcome but powerful organized authorities in this country. Here, again, is this major contradiction in American medical life: freedom of the individual opposing powerful social institutions, such as the Government or, more usually, medical organizations. Organized medicine, through the instrumentation of the Council on Medical Education and Hospitals, along with the American Hospital Association, the American College of Physicians, etc., has instigated supervisory machinery and has forced conformity to its standards. Many physicians vehemently disagree with the philosophy and technique, but most agree that the level of practice and the care of the patient have been improved by this physician-designed and implemented program of self-policing, particularly in the community hospital. As a consequence it appears that community hospitals of the future will be thriving centers of research and health education, a pattern which, I believe, is worth studying by physicians in other countries.

As stated, research can often be done best by a team of specialists. A neglected resource has been the private and nonprivate medical group of specialists who could provide an unusual clinical and research experience for medical students in day-to-day representative clinical situations which are becoming less available to them in university hospitals and clinics.[3, 10, 11, 12]

Although collaborative investigation, either in the university, the community hospital, or in the group clinic is generally acknowledged to be the most effective pattern for research, the talented individual working alone, and perhaps because he is working alone, unfettered, unsupervised, and uncommitted, and often without elegant equipment, can make spectacular scientific contributions. The most revolutionary hypothesis in the last century and a half—the evolution of species by natural selection—was born out of a 1-man study of animals and plants in the Galápagos Islands by Charles Darwin, and of animals and plants in the islands of the East Indies by Alfred Russell Wallace.[1] The solo investigator is not extinct.

In 1961, when Houssay[13] received the Nobel Prize, he stated: "The most remarkable piece of research apparatus is the human brain. Some people want to buy every piece of equipment known to science. They believe that with a beautiful building filled with modern equipment they have a first-rate research institute. This is a superstition. The great discoveries have been made by men working alone."

No man is an island, but as medical educators all of us should appreciate that the individual investigator is not extinct and that the talented individual's curiosity and drive to discover is irrepressible and so compelling that even in this day of complex, elegant laboratories, the gifted, working alone, and what's more, even in a field different from his own, may make substantial contributions to science and technology. An analysis of more than 60 of the main inventions of the twentieth century disclosed a tendency for originality and creativity to show up in areas quite different from the inventor's own field. For example, the automatic dial telephone was devised by a mortician. The inventor of xerography was a lawyer. The pneumatic tire came from a veterinary surgeon. It is suggested that specialization may have so cramped their inventive abilities in relation to their own specialty that they found release for their inventive genius outside their original field.[14]

Thus, although some generalizations are valid, it is apparent that there is no stereotyped formula for encouraging research or for identifying the promising student-investigator.

There are many other paradoxes and contradictions in the American medical scene, as you have probably observed. Some are not unique to the United States, but, in my opinion, our philosphy and posture of medical research and education reflect our native strengths and weaknesses and also our Nation's history. Much of our philosophy and bias stem from our frontier experience from which we are not far removed. Of particular force and effect is our native inordinate love of freedom. This is not necessarily an unmixed blessing, since there is more to life than freedom and, as Eric Fromm[15] points out, we have not yet developed the requisite skills and institutions to make optimum use of our freedom.

Looking at the twentieth century in the broad context of the last 500 years we have been compared to a puppy which has just been released from an extended hobbling in the dog house. The puppy dashes about, upsets the milk bottles on the back steps, grabs playfully at the clean sheets flapping on the clothesline, knocks down the neighbor's toddling 2-year-old son, and scares the youngster while licking his face. Like the puppy, we are well-intentioned but undirected because we lack the experience, knowledge, and skill to use our newfound strength and freedom wisely. It is not enough to be free from domination and crises. We need to develop institutions and means and discipline for expressing and efficiently using that freedom for constructive ends.[16]

To summarize our predicament: Because of increasing specialization, research, education, and patient care in this country demand increasing collaboration. But collaboration requires forfeit of our personal freedom and this is antithetical to our pioneer philosophy. Further, this national veneration of freedom and rugged individualism, particularly among physicians, tends to nullify the efforts at teamwork. The resolution of this conflict between individual freedom and subjugation to group ideals may come about through the Hegelian proposition of thesis, antithesis, and synthesis. And, curiously enough, the resolution and synthesis of this seeming impasse may flow from yet another unique American tradition—

the tradition of organization and successful unification of opposites, i.e., Management.

We have a unique tradition of at least 100 years of encouraging private organizations. Countless centers of initiative have thus been created, and managers have had strong incentives to develop expert techniques which have become formalized, institutionalized, and are indispensable for effectual operation wherever people work together. Because of our history the art of management has evolved to a high degree of perfection in this country, particularly in contrast to the East. Neither the Russians and their satellites nor the Red Chinese possess a long, rich history of organizational trial and error that the West has enjoyed. On the eve of the Bolshevik Revolution in 1917 a fellow revolutionary suggested that the Communist Party would need administrative experts to help take over the machinery of government. The notion was "pure absurdity," Lenin said; "any workman can learn to become a minister in a few days." But recently Communist officials have openly expressed admiration and even a desire to emulate our managerial sophistication. Moscow State University has set up a laboratory for the study of management problems, and a State Committee for coördinating scientific research work has established a Council on the scientific principles of managing the economy. The programs of a growing number of Russian research institutes and conferences include some attention to problems of organization and administration.[17]

Thus, through fortuitous historical evolution we in the United States have achieved a synthesis of opposing forces which, though far from perfect, is evidently worthy of imitation by our severest critics. The milieu and matrix of this synthesis of diverse and opposing forces are well described in the Federalist papers, a body of letters written by some of the authors and supporters of the American Constitution, urging its adoption.

Perhaps it would be practical to examine your local medical scene in a historical perspective. Possibly, the key to many of your research, education, and patient-care problems may be in the hands of an expert manager, that is, the research and education coördinator who, in the United States, is becoming yet another new specialist with a specialized talent and training and with a great deal of authority and power. These very qualities, of course, will understandably incite suspicion, but it is hard to deny the utilitarian value of a professional organizer who can unify opposing opinions and objectives, keep communication open among the specialists, spare the working scientist from distractions and, most important, help find and recruit promising students.

It may be your duty to find such a key person or perhaps to fill the role of such a manager yourself. You may expect that pressure on a research coördinator will be unrelenting and from many directions, e.g., to promote "practical research" only. This may be in response to the need to get more research money, to achieve sudden eminence, to quickly invent some clinically useful technique or apparatus, etc. Basic science may arouse little interest and, as you know, in many quarters basic research is considered to be wasteful, starry-eyed dilettantism.[18] This old and universal problem was not new even when Benjamin Franklin, while Ambassador to the French Court, witnessed some of the first balloon ascents. To skeptics who queried what use a balloon might ever have, Franklin is said to have replied, "What good is a newborn baby?" Also, Michael Faraday, who discovered electromagnetic induction, the foundation of modern electric power, was demonstrating this phenomenon in his laboratory to Prime Minister Gladstone. His distinguished visitor, who was unimpressed, asked, "What is the good of this discovery?" Faraday is alleged to have replied, "Some day, Sir, you will collect taxes from it."

The medical coördinator somehow must reconcile these many divergent positions, but his most compelling obligation is to recognize and recruit, for careers in research, medical students who show talent for investigative work. Research brains are badly needed and are one of the greatest natural resources of any country.

How would the medical coördinator identify and encourage medical students who are potentially successful research workers? This crucial question remains unanswered and is further compounded by the recent recognition that there are 2 basic types of research activity: (1) problem-finding, defined as the detection of the need for a new program by comparing existing and expected future programs; and (2) problem-solving, defined as the selection and use of an existing program from an existing set of programs.

The problem-finders are so scarce as to cause a serious bottleneck in research activity in the near future. According to Mackworth,[19] one reason why problem-finders are scarce is that aptitude and other psychologic tests are biased against problem-finders because they inevitably favor the solver, and educational psychologists use examinations and intelligence tests which pick out the efficient verbal reasoners rather than the intuitive observers or constructive thinkers. It seems then that criteria for selecting medical students need systematic reëxamination and validation, another major task for the coordinator.

But, as stated, the most compelling obligation for the research coördinator is to find the young gifted investigator, and I would add that the most compelling research problem for the coordinator, and indeed for all medical administrators, is to design a combined study on the discovery and deployment of such valued people.

I predict that when data on such a study are tabulated it will show that the capable student-investigator is also capable in the clinic, since he intuitively recognizes that every patient is an individual challenge and approaches each diagnostic puzzle with a sense of intense personal involvement and excitement, using the same techniques of careful observation and information assembly, weighing and analyzing the evidence. And in either the laboratory or in the clinic he finds the joy of engaging in intellectual exercise rewarding for its own sake and soon discovers that the search for truth is more important than its possession.

References

1. Pickering, G.: Brit. Med. J., 1964, **2**, 1615.
2. Oppenheimer, R. J.: The Open Mind. New York: Simon & Schuster, 1955.
3. Stevens, H.: Neurology at the decussation, in press.
4. Stevens, H.: Amer. J. Psychiat., 1949, **106**, 292.
5. Foraker, A.: New Eng. J. Med., 1963, **268**, 1235.
6. Martin, C., and Jeghers, H.: J. Med. Educ., 1965, **40**, 75.
7. Miller, G.: J.A.M.A., 1963, **186**, 1075.
8. Editorial: Teaching medical care. Ann. Intern. Med., 1965, **62**, 624.
9. Dimond, E. G.: J.A.M.A., 1964, **190**, 1118.
10. Glaser, R.: New Eng. J. Med., 1964, **271**, 1398.
11. White, K.: Ann. Intern. Med., 1965, **62**, 603.
12. Rammelkamp, C., and Chester, E.: New Eng. J. Med., 1964, **271**, 349.
13. Houssay, B.: My struggle for science. World Health, 1961, **36** (Sept.–Oct.).
14. Jewkes, J., Sawers, D., and Stillerman, R.: The Sources of Invention. London: Macmillan, 1961.
15. Fromm, E.: Escape from Freedom. New York: Holt, Rinehart & Winston, 1941.
16. Berrien, F. K., and Bash, W. H.: Human Relations: Comments and Cases. New York: Harper, 1956.
17. Ewing, D.: Harper's, 1965, **67**, 230.
18. Dubos, R.: The Dreams of Reason. New York: Columbia, 1961.
19. Mackworth, N.: Amer. Psychol., 1965, **20**, 51.

Letters to the Editor

DOCPAC Needs Members

How many times have you heard it said by busy doctors: "Look, we are doctors—we are physicians—we are not politicians. If the politicians would just leave us alone, we would leave them alone. All we want to do is practice medicine in peace and without government interference."

Because of this attitude and because of the physicians' lack of interest in politics, we now have a Medicare bill which will affect every one of us. This may or may not be detrimental. However, it should be obvious to everyone concerned that amendments will come along year by year, Congress by Congress, and that some of these amendments will be good for medicine and others will be bad.

The leaders of American medicine, and your local representatives of the District of Columbia Political Action Committee, realize that many of our legislative goals, in order to be attained, need political friends on Capitol Hill. Our fighting arm must be effective. To be effective we must nourish our political arm with dollars for purposes of administration, overhead, and political education. Therefore, every member of the District of Columbia Medical Society who is interested in good government should help finance increasingly expensive campaigns required in modern politics. It is the aim of DOCPAC to work not only through organized American medicine on a national level but also, and most importantly, locally. This is especially true if we are to have Home Rule.

It is the desire of all the members of DOCPAC that all the members of the District of Columbia Medical Society know that this PAC movement will provide you, organized medicine, with an invaluable ally throughout the years ahead.

Join now. DOCPAC needs members. DOCPAC needs dollars. We represent you!

William H. Cooper, M.D.
Chairman, District of Columbia
Political Action Committee

PRESIDENT'S PAGE

DEDICATION CEREMONIES

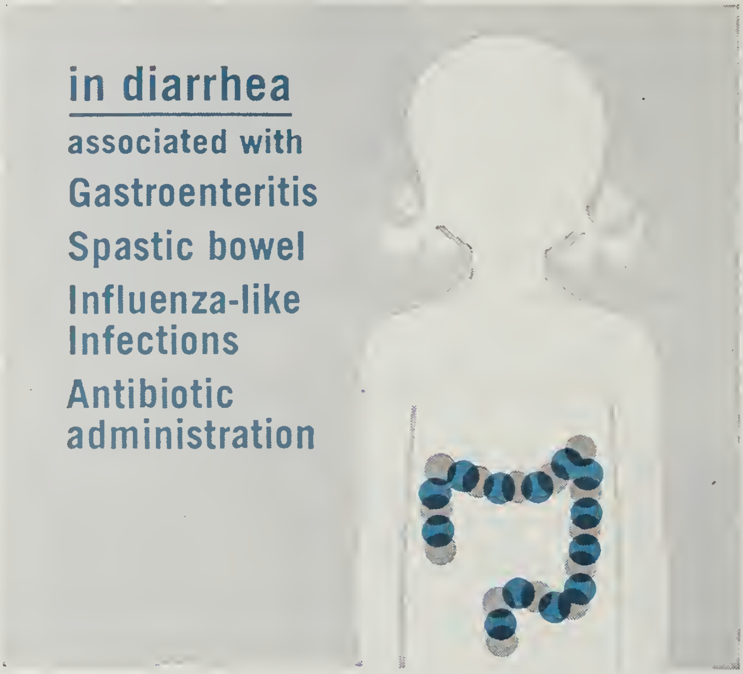
A MILESTONE IN THE HISTORY of the Medical Society of the District of Columbia will be recorded on Sunday, March 13, with the cornerstone-laying ceremony beginning at 1:00 p.m. This date has been selected with the assurance that the new Medical Society Building at 2007 Eye Street, N.W. will be completed. Dr. James Z. Appel, President of the American Medical Association, and other dignitaries will participate in the dedication ceremonies that every member of our Society should attend.

A tour of the building will leave you with a real sense of pride in the progress and accomplishments of your Society. The graceful architectural decor of the main floor has already provoked much favorable comment and brought suggestions of an architectural award. You will, I am sure, be impressed that this is not only a new building but also a center to serve as a focal point for all medical activities in this Metropolitan Area. Not only are there a number of conference rooms available for committee meetings, but parking facilities in the basement can be arranged for committee members. The Meeting and Exhibit Hall has completely modernized projection and audio equipment. With facilities for food catering adjacent to the Hall, it should be more useful than the auditorium in the old building.

The furnishings of the new building are being purchased in part by donations from members and other benefactors. These subscriptions will be acknowledged by an appropriate plaque on the particular piece of furniture. While the response to the appeal for these donations has been encouraging, there remain a number of items of varying cost that you may wish to identify as a donation of yours. A new mailing is to be sent soon, so please give it your attention.

Hoping to see you at the dedication ceremonies,

Robert J. Coffey


in diarrhea
associated with
Gastroenteritis
Spastic bowel
Influenza-like Infections
Antibiotic administration

normal activity...

promptly...

In children with diarrhea prompt symptomatic control is usually urgently indicated to relieve cramping and to prevent dehydration.

Lomotil halts precipitous progress through the intestines and controls diarrhea with notable promptness, safety and effectiveness.

Experimental evidence[1] has shown that Lomotil is more efficient in this regard than morphine without the latter's manifest disadvantages. In roentgenographic study[2] Lomotil slowed gastrointestinal propulsion within two hours.

At the same time, by diminishing overstimulation of the intestines, Lomotil relieves the abdominal cramps and discomfort so distressing to youngsters.

Lomotil gets children off toast and tea and back to normal diets and normal activity with gratifying celerity.

with LOMOTIL® liquid/tablets

Each tablet and each 5 cc. of liquid contains:
diphenoxylate hydrochloride ....2.5 mg.
(Warning: may be habit forming)
atropine sulfate ....0.025 mg.

Dosage: For full therapeutic effect—Rx full therapeutic dosage. The recommended initial *daily dosages,* given in divided doses, until diarrhea is controlled, are:

Children:
3 to 6 months—3 mg. (½ tsp.* t.i.d.)
6 to 12 months—4 mg. (½ tsp. q.i.d.)
1 to 2 years—5 mg. (½ tsp. 5 times daily)
2 to 5 years—6 mg. (1 tsp. t.i.d.)
5 to 8 years—8 mg. (1 tsp. q.i.d.)
8 to 12 years—10 mg. (1 tsp. 5 times daily)

Adults: 20 mg. (2 tsp. 5 times daily or 2 tablets 4 times daily)
*Based on 4 cc. per teaspoonful.

Maintenance dosage may be as low as one fourth the therapeutic dose.

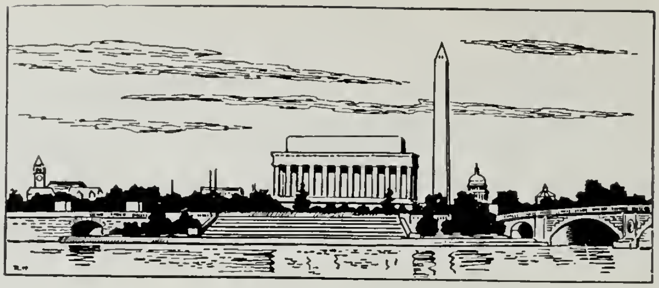
Precautions: Lomotil, brand of diphenoxylate hydrochloride with atropine sulfate, is an exempt narcotic preparation of very low addictive potential. Recommended dosages should not be exceeded. Lomotil should be used with caution in patients with impaired liver function and in patients taking addicting drugs or barbiturates. The subtherapeutic amount of atropine is added to discourage deliberate overdosage.

Side Effects: Side effects are relatively uncommon but among those reported are gastrointestinal irritation, sedation, dizziness, cutaneous manifestations, restlessness and insomnia.

1. Janssen, P. A. J., and Jageneau, A. H.: A New Series of Potent Analgesics: Dextro 2:2-Diphenyl-3-Methyl-4-Morpholinobutyryl-pyrrolidine and Related Amides. Part 1: Chemical Structure and Pharmacological Activity, J. Pharm. Pharmacol. *9*:381-400 (June) 1957.
2. Demeulenaere, L.: Action du R 1132 sur le transit gastro-intestinal, Acta Gastroent. Belg. *21*:674-680 (Sept.-Oct.) 1958.

SEARLE

Research in the Service of Medicine



EDITORIALS

Medical Economics in a Changing World

INEXORABLY and with strident surge, the speed of change is accelerating. We are swept along in a world which cannot stop to let anyone get off and live comfortably in the past. Every day brings insistent new evidence that physicians must look to wider horizons, recognizing that as scientists their very successes have caused imbalance in nature itself. This imbalance must be corrected, while as humans of rare opportunity to understand they must hear and heed the loudest calls yet of humanity seeking comfort.

Of immediate urgency are the economic problems which beset us. It is significant that in the past 25 years the percentage share of all disposable income has nearly doubled. But of even more significance is the fact that in the same length of time the amount spent on health care in this country has grown from 4 to 35 billion dollars annually. Inadequately appreciated is the fact that during all this amazing growth the share of Government at all levels has been fairly constant, at about ¼ of the total. The truly dramatic financing change has been the growth of health insurance, from a relatively insignificant level to one approximately equal to the government total. Voluntary health insurance has grown to cover about ⅔ of all hospital bills, ⅓ of all physicians' charges (including most of the more extraordinary ones), but practically nothing of dental or nursing care, drugs and other costs.

The increasing desire of the public for more health insurance and the willingness to pay for it have been most dramatically shown by the more than ⅘ of all Federal employees who chose high option rather than low option programs, although the full additional cost has had to be borne by the employee.

It has thus become clear that the insurance mechanism is here to stay and is to be increasingly employed, with the major question being whether it will be voluntary or compulsory, or in the private or governmental sector.

Next July 1, in a mammoth program 7 times as large as the entire Federal Employee Health Benefits program (previously much the largest in existence), the Federal Government increases its share in the 35 billion dollar annual health care effort to ⅓ of the total. Among the effects of this remarkable law, which is a tribute to the legislative genius of Chairman Wilbur Mills, the following are outstanding, and all (though in varying degree) have great potential in influencing the role of medicine as a principal control in shaping the health care programs of the future:

1. As a showcase operation, with nearly 20 million patient histories on one computer tape, Medicare will unveil much of the mystery left in medicine, especially as to financing detail.

2. Physician-hospital relations will be notably modified by review boards and hospital-based specialist changes.

3. There will be clarification of the relations of physicians and institutional providers of health care to third parties, who will use payment systems to influence quantity and quality of care.

4. There will be expansion and strengthening of the health care system partnership with Government.

5. Clinical teaching with private patients as the subjects for student study will rapidly supplant the heavy dependence on charity ward patients for this purpose.

6. There will be a review of values (aside from money alone) based on professional satisfactions of achievement under motivations of high purpose.

7. Voluntary health insurance for the rest of the people will have added stimulation to expand

Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of the Medical Society of the District of Columbia

and improve. The issue becomes ease of payment rather than ability to pay.

The problems of prepayment are largely understood. It must serve the public interest if it is to serve the profession. If items of health care (especially outside the hospital) are to be insurable, the profession must devise and exercise suitable controls. Prepayment costs can be predictable only when unit cost and utilization rates are professional concerns.

Reasonable uniformity in scope of benefits, contract provisions, relative value scales, and methods of giving service is important because the majority of American workers are in groupings which overlap several state lines and they usually receive employer aid in paying for health insurance.

The present demands on our profession are clear to all who will see. To retain suitably our way of life we must till these new fields. We must do so now because the forces of economic change in health care are at flood tide. We must act suitably to keep control under an enlightened self-interest which converts our acts to deeds of public service.

Donald Stubbs, M.D.
Past Chairman of the Board,
National Association of Blue Shield Plans

Regulations to Curb Illicit Drug Traffic

On February 1, 1966, PL 89-74 went into effect. As has been widely publicized, its purpose is to curb drug abuse through the curtailment of illicit drug traffic. To accomplish this, the law establishes special controls over the manufacture and distribution of depressant and stimulant drugs. Among these controls is the keeping of records of the manufacture, sale, delivery, and receipt of such drugs, and it is to this matter of record-keeping, in so far as it refers to physicians, that I should like to invite your attention.

Recently, there has been some confusion as to what records physicians must keep under PL 89-74. Putting it simply, they are not required to keep records as a consequence of this law unless, in the course of their practice, they dispense the drugs referred to and charge for them. The law is quite clear on this, and I quote from that part of the Act relating to record-keeping:

"The provisions of paragraphs (1, Records) and (2, Inspection) of this subsection shall not apply to a licensed practitioner . . . with respect to any depressant or stimulant drug received, prepared, processed, administered, or dispensed by him in the course of his professional practice, unless such practitioner is regularly engaged in dispensing any such drug or drugs to his patients for which they are charged, either separately or together with charges for other professional services."

The key phrases in this paragraph are the words "regularly engaged" and "for which they are charged."

Further in this regard is a quotation from the House Report of the Committee on Interstate and Foreign Commerce on H. R. 2 which became PL 89-74:

"The committee intends . . . to require record-keeping and to permit inspection in the case of those physicians who maintain a supply of pharmaceuticals or medicinals in their offices from which they compound prescriptions for their patients for a fee."

The language of the Senate Committee Report is identical. Both committee reports stated that those required to keep records "involve only a very small percentage of physicians."

The proposed regulations underscore this point, indicating that " . . . maintaining of small supplies of these drugs for dispensing or administering in the course of professional practice in emergency or special situations will not be considered as regularly engaged in dispensing for a fee."

For those physicians who, in the course of their practice, regularly dispense drugs and charge for them, certain records are required to be kept for 3 years, effective February 1, 1966. Included are: a complete, accurate record of all depressant and stimulant drugs on hand February 1, 1966; a complete, accurate record of the kind and quantity of each drug received, sold, delivered or otherwise disposed of; the name, address (and registration number under Section 510 [e] of FDCA) of the person from whom the drugs were received, and to whom they were sold, delivered, dispensed or otherwise disposed of; and the date of the transaction. No separate form for these records will be required as long as the information specified is available.

Summing up, under PL 89-74 physicians do not have to keep records unless they regularly dispense the drugs covered by the Act and charge for them.

C. Joseph Stetler
President, Pharmaceutical Manufacturers Association

The Morris Cafritz Memorial Hospital

The Morris Cafritz Memorial Hospital, a handsome new structure at 1310 Southern Avenue, Southeast, is, above all else, a tribute to perseverance. The history of the Hospital dates back to 1953 when The Greater Southeast Community Hospital Organizational Committee was established, primarily to search for a group or organization to provide hospital facilities for Southeast Washington and Prince George's County, a large area with a greatly expanding population in need of hospital facilities.

The Hospital Foundation was incorporated in 1955 and the first campaign for funds took place in the fall of 1956. This was a door-to-door "membership drive" conducted without professional assistance, and "membership" consisted of annual dues of $10.

To balloon $10 membership dues into an $11,500,000 hospital was a staggering proposition but, as the dam fell before the battering of the ram (according to a recently popular song), financial barriers were slowly breached. Receipt of over $4 million from Federal and District grants through the Hospital Center Act and Hill-Burton funds, an unprecedented grant of $650,000 from Prince George's County (Maryland), and a $4 million long-term loan carried the project along at a faster rate. The remainder has been raised from private and corporation donations.

A brief review of the events which led finally to this memorial hospital is worth recording.

Professional help for fund-raising was secured in the fall of 1957. But by 1960 the project appeared hopeless, and the trustees voted to turn over the Hospital assets to the Felecian Sisters, a Catholic Order. However, at a large community gathering at the D. C. Armory the members of the Foundation voted this action down and decided to make one more effort to raise the funds. Mr. Raymond J. McDonough, President of the Foundation since 1957, invited the late builder and financier, Mr. Morris Cafritz, to this meeting, and he was impressed enough with the enthusiasm shown to offer his assistance to the Foundation as chairman of the special gifts campaign. This was the "spark" which the project needed, and the Hospital bears his name today, not because of his own financial assistance, which was considerable (the Cafritz Foundation has just turned over $250,000 to the Hospital), but because the impetus he gave the project carried it through the building stage.

Construction of the 8-story, 400-bed hospital was begun in the fall of 1963 on the site of the former Camp Simms and is scheduled for completion this month. Designed by Gordon A. Friesen, Associates, as a functional unit, the Hospital is built on the principle that staff and employees should use their abilities to the fullest capacity in that work for which they are trained and assigned. Toward this end a number of innovations are reflected in the location of medical and surgical areas, special facilities in patient rooms, advanced intercom network, automatic data-processing, and new uses of pneumatic tubes.

Patients are scheduled for admittance in early April. The last financial hurdle—about half a million dollars with which to open—was only recently removed. However, Mr. E. Brooke Lee, Jr., who is in charge of raising funds, will welcome contributions from any source to decrease the huge indebtedness. A medical staff is in readiness, headed by Dr. Frank S. Pellegrini, whose equanimity and humorous outlook have resolved many difficulties. An administrative staff is already busy under the direction of Mr. George T. Stafford. Finally, a community of more than 300,000 residents will cheer with them when the plant, soon operational, opens its doors.

A. L. E.

CAPITAL NURSE REGISTRY

(Est. 1910)

Licensed Practical Nurses and Practical Nurses Recommended by Physicians

All Nurses Have Had Hospital Training

One of Washington's outstanding Registries, serving physicians and surgeons since 1910

Licensed by District of Columbia

24 Hour Telephone Service

RAndolph 3-2600 or 3-1771

Experiences of a Volunteer Internist in South Vietnam

FRED A. J. GEIER, M.D., F.A.C.P.

Emeritus Head, Department of Medicine, Doctors Hospital, Washington

It was my privilege to have worked 2 months at a hospital in South Vietnam, a country torn by war and where there is great and urgent need for medical care. It was a challenging and rewarding experience.

My decision to go to South Vietnam came shortly after President Johnson's June, 1965 appeal to the American Medical Association for assistance in obtaining volunteer physicians to serve the civilian population of that war-devastated country.

"I would commit the American nation," President Johnson told the students of the National Cathedral School for Girls, "to face up to its obligation to be with the world's people on their march toward the life that all God's children should know on this earth. When the time of judgment comes it will be no excuse to say that they were far away, or their language was strange, or their color was different, or I did not know their names."

Almost immediately representatives of Government, the medical profession, and church and welfare organizations met and unanimously supported the President's appeal. And out of this unanimity came Project Vietnam, presently administered by the People-to-People Health Foundation with the assistance of the AMA and the Agency for International Development (AID). Its Chairman is Dr. William B. Walsh and its Program Director is Dr. Edwin W. Brown, Jr. It recruits and sends doctors to work in Vietnam, usually for periods of 2 months.

In preparing for my trip it was necessary to have a valid passport, certification of good health from a physician and dentist, and certifications of vaccination against smallpox and inoculations against cholera. Although not required but as an added precaution I was inoculated against typhoid, paratyphoid, tetanus, plague, typhus, polio, flu, and infectious hepatitis (gamma globulin).

Before departure on October 4, 1965 an orientation session was held in the office of Project Vietnam; and at 6 p.m. that same day I left with 5 other physician-volunteers for the first leg of our long jet flight. We stopped for a day in Honolulu, then continued on to Saigon, with short fueling stops in Guam and Manila.

Vietnam stretches along the bulging southeastern shore of Asia. It is bordered on the extreme north by Communist China, on the west by Laos and Cambodia, and on the east by the South China Sea. The 65,000 square miles lying south of the 17th parallel (the Cease Fire line of July 22, 1954, which ended the fighting between the French and Vietnamese) comprise the Republic of Vietnam. It has long been regarded as the major geographic and military obstacle to further Communist expansion in Southeast Asia. North of the 17th parallel are the 62,000 square miles dominated by the Communists.

BỊNH VIỆN THỦ-KHOA-NGHĨA

Entrance to the Khoa Nghia Hospital.

The Vietnamese language is monosyllabic and may be written in Chinese ideographs or in the *quoc-ngu* alphabet. French is spoken among the upper classes.

We arrived in Saigon, October 6, and after another brief orientation session each was assigned to a hospital. I was assigned to Thu Khoa Nghia Hospital in Can Tho, a town of about 50,000 located in the Mekong Delta about 70 miles southwest of Saigon. Thu Khoa Nghia is a regional hospital, which, under the very capable direction of Dr. Lee Van Khoa, a Vietnamese trained physician, takes care of a large province. (There are 43 provinces in South Vietnam.)

The hospital has a total of 455 beds, but average patient occupancy is about 500, with often 2, and occasionally 3 patients to a bed. Monthly admission rate is 1,500, with over half being medical cases. There is an outpatient clinic for tuberculosis which treats an average of 100 patients daily. This clinic is held in a new TB clinic building, quite modern in construction but woefully understaffed because of the difficulty in obtaining specialists whose primary interest is in that disease. There are, however, 2 mobile X-ray units which provide facilities for chest examinations not only of Can Tho residents but villagers from nearby hamlets. The clinic is under the direction of Dr. Lee Van Thuan, a private physician who donates his services.

Dr. Khoa, Administrator of Hospital; Dr. Geier; and Dr. Thuan, head of the TB Clinic.

Thu Khoa Nghia Hospital is quite old, having provided service to the Vietnamese people since 1895. It became a regional hospital only in 1964. There is a staff of 5 Vietnamese doctors and 30 trained nurses of various levels. In addition, it provides clinical nursing experience for 37 Red Cross students and 11 rural student nurses. Since 1962 U.S.O.M. (United States Operations Mission) has provided an Americal surgical team at the hospital; at the present time there is a U.S. Air Force surgical unit consisting of 3 surgeons, 3 nurses, and 3 technicians. There are, in addition, 2 doctors from Project Vietnam, each assigned for 60 days. There is 1 American nursing service advisor, Miss Ann Fry, who acts as counterpart to the chief nurse in an effort to provide better patient care. At the present time the maternity section has an average monthly rate of 350 newborns.

On the surgical side of the hospital there is the operating suite, which has 2 small operating rooms and 2 postoperative medical wards. In addition, there are female medical and male medical wards, and one small portion of the hospital is devoted to pediatric medical cases.

There is a small laboratory serving the hospital, but it is limited in the number of tests that it can do. Generally speaking, one can obtain complete blood counts, urinalysis, stool examination, blood sugar tests, serum bilirubin, VDRL, and Widal's tests. There is a pharmacy which, although somewhat limited in supplies, seems to have the necessary major drugs and antibiotics. Blood for transfusion at times is in short supply; the usual amount given is 250 c.c. Various intravenous solutions, particularly glucose and glucose and saline, are in ample supply.

Being assigned to the medical wards, I was very impressed with the large number of admitted cases suffering from liver disease. The patients were usually peasants, who worked as rice farmers and came to the hospital complaining of epigastric pain. Upon examination, the major findings were extensive pyorrhea and enlarged hard liver, the liver usually extending down to the iliac crest, with tremendous distention of the abdomen with ascitic fluid. The patients' histories indicated they had been sick for a period of about 3 to 4 weeks; ages varied from 2 years to 70. There was no history of the use of alcoholic beverages or of a similar illness among their friends in the hamlets or villages. Further investigation of the liver cases showed an occa-

Hepatitis in an infant.

sional evidence of jaundice, either objectively or by an elevation of serum bilirubin. Treatment usually consisted of rest, low-salt diet, parenteral vitamins, particularly B-complex, and judicious use of mercurials such as Mercuhydrin®. In some instances, because of the great respiratory embarrassment and tremendous abdominal distention, a paracentesis was done to give temporary relief. Although these cases appeared to be typical cirrhosis of the liver with portal obstruction, the exact etiology was not determined. Almost without exception the complete blood counts showed a hematocrit of between 20 and 30 per cent and a white count between 2 and 3 thousand with a normal differential. The stool examination in a large majority of the cases showed ova of ameba, Ancylostoma, and Ascaris. It was difficult to assign the etiology of the liver disease to these intestinal parasites because at least 80 per cent of all admissions revealed these ova in the stools. One biopsy showed chronic hepatitis of the cholangiolytic type.

Fever of undetermined origin was not unusual, and in these circumstances therapy was chiefly of a supportive nature, with an accurate diagnosis never clearly documented. The availability of blood cultures would have made this problem much less frustrating.

Malaria in the Can Tho area of the Mekong Delta was less prevalent than I had anticipated, but I understood it was an important cause of disability in the central highlands of South Vietnam.

Some of the anemias were undoubtedly due to various types of blood dyscrasias or bone-marrow depression. Unfortunately the laboratory was not equipped to do bone-marrow biopsies. Leukemias and undifferentiated anemias due to increased erythrocyte loss or destruction as well as nutritional deficiency were difficult to evaluate from the laboratory tests available.

There were several cases of cholera clinically diagnosed chiefly because of the acute onset of intractable diarrhea with rice-water stools and dehydration with or without evidence of *Vibrio comma* in the stool. These patients were treated vigorously with intravenous fluids, particularly glucose and saline solutions.

I was also surprised by the large number of typhoid patients who were admitted, usually only after they had complications such as perforation. They, of course, required emergency surgery.

I saw many cases of carcinoma, particularly of the lungs. Although much evidence is accumulating that heavy cigarette smoking plays an etiologic role in many cases of squamous and undifferentiated carcinoma of the lung, the history of the rice farmer revealed that they rarely use tobacco. Gastrointestinal carcinoma, particularly involving the stomach either as adenocarcinoma or linitis plastica of the scirrhous carcinoma type, was seen in 4 or 5 instances. And carcinoma of the cecum and rectum was observed occasionally. Sometimes obstructive carcinoma of the esophagus and pyloric end of the stomach was in an advanced stage, and in the latter instance a gastroenterostomy gave only temporary relief. Carcinoma of the prostate with total bladder-neck obstruction caused enormous bladder distention with relatively minor distress. Temporary treatment required immediate decompression of the bladder by the insertion of a Foley catheter. The patient was then recommended for transfer to a hospital in Saigon where urological consultation and management were available.

Peritonitis from typhoid perforation.

Many of the patients from the outlying villages and hamlets would wait until they had complications, such as ruptured appendix or ruptured peptic ulcer or pyloric obstruction, before they would come to the hospital. I learned through Miss Dat, my interpreter, that they would resort to Chinese medications consisting of various types of herbs and cupping before coming in to see us.

The main diet of the Vietnamese farmer consists of rice, fish, vegetables and soup. They seldom have meat. When they were admitted to the hospital it was difficult to prescribe a specific

Viet Cong prisoner being treated for pneumonia.

diet because there was no dietitian on the hospital staff and there were no special diets for patients as we know them in the United States. The kitchen was under the supervision and management of a private contractor who provided 3 meals a day, chiefly of rice, fish and vegetables, which was estimated at about 2,500 calories. Occasionally dry-fat powdered milk obtained from U.S.O.M. was used with the breakfast meals.

It was very unusual to see cases of hypertension during my 2 months' service, and I saw only 4 patients with a systolic blood pressure over 150. Usually there was hypotension with the systolic pressure around 90 and the diastolic pressure about 50. I saw 3 patients with cerebrovascular accidents with hemiplegia, many patients with unclassified anemia, and a few scattered cases of tetanus, tuberculosis, epilepsy, splenomegaly, flu and virus pneumonitis. Two young men were admitted with the chief complaint of dyspnea and were found to have rheumatic heart disease complicated by pure mitral stenosis. I felt that mitral commissurotomy might have permitted direct surgical relief of the mitral valvular obstruction. However, the hospital had no cardiac surgeon or facilities necessary for the preoperative preparation, postoperative care, or for supervision of their long-term management. On 4 occasions I was called upon to treat Viet Cong who were prisoners and who had been brought to the hospital under heavy guard. After treatment they were taken back to prison. In addition to seeing patients in the medical wards there was also opportunity for me to teach. I gave lectures to approximately 35 nurses twice a week, which lasted about an hour, and similar lectures for 20 to 30 Vietnamese doctors.

Class of nurses being taught by Dr. Geier.

Because of the tremendous admission rate, particularly to the medical ward, the beds seemed overcrowded to me upon my arrival. When I learned that patients were not selected by a physician for admission I organized an out-

Patients being treated for carcinoma (left to right): of right temporal bone; of prostate with bladder obstruction; of stomach; of the thyroid.

patient medical clinic where many of the patients could be treated without hospitalization. This decreased the load on the medical wards.

Shotgun wound of the head.

The personnel of the hospital without exception were cordial, coöoperative, considerate, and seemed to want to do everything necessary for the civilians who required treatment or hospitalization. Although the peasants could not speak English they had an extremely friendly air toward us. They were gentle in manner and in speaking, and they endured much pain with a minimum of complaints. Their appreciation for what was being done was often shown by a shy and friendly smile and the placing of their hands together in supplication and bowing gently from the waist.

The battle casualties inflicted on the civilian population were very numerous; some of the wounds were indescribable. This type of patient had priority in so far as surgery was concerned. There was little time or room for elective surgery.

The weather during my tour was extremely hot and humid. There was little relief afforded by the monsoon that occurred periodically during the day and night. The living conditions were adequate; the food was good. There was minimum risk because the U.S.O.M. apartments where I lived were heavily guarded. However, there was evidence of military activity, particularly at night across the river where heavy gunfire and flares lighted the sky.

In a hospital such as I have described there is a tremendous amount of work for an internist or general practitioner, as well as the surgeon. There was little else to do in Can Tho except walk along the water front or visit the market place, with an occasional visit to the nearby refugee camp and orphanage for necessary medical advice, but I am positive that any volunteer would find working with Project Vietnam a rewarding experience.

EDITOR'S NOTE: Offices of Project Vietnam are located at 2233 Wisconsin Avenue, N.W., Washington, D.C. 20007; telephone: 338-5730.

Health Dept. Notes

Fatal Accidents in D. C.

A RECENT REVIEW of causes of death in the District of Columbia discloses that the accident mortality rate continues to remain high.

During calendar year 1964, for instance, accidents were in fourth place in Washington as the recorded cause of death. They were preceded only by heart disease, cancer and stroke; since the latter conditions generally affect older persons, accidents obviously strike heavily among children and youth.

Statistics bear this out, for they show that accidents are the leading cause of death through childhood and into the teens and twenties. They also show that for each fatal accident among these younger people, there will be many nonfatal accidents which result in disability, and, in some cases, permanent impairment.

This is not necessarily new information for physicians and surgeons who daily see and must deal with the results of these accidents. Nor is it startling to those of us who must work with the accident problem as a whole.

But it is still surprising to be reminded, by statistics, how many accidents occur in the home. It would seem that the hazards in the home would be fewer and the person more in control of the environment; but it is disheartening to discover, as these accidents are reviewed, how more care and forethought might have prevented tragedy.

During the year 1964 there were 528 fatal accidents in the District. The largest single grouping occurred in the home; there were 211 of these. Motor vehicle accidents were next most frequent and there were 152 of these. Fatal accidents in general public areas were third; there were 104 such deaths. Next were 21 at-place-of-work fatalities, and finally 40 accidents with circumstances not specified.

In the home accident category, there were 81 fatal falls. Most of these occurred to older persons, as would be expected. There were 50 deaths from home fires and explosions; these occurred most frequently to very young children and to the elderly. There were also 12 cases of mechanical suffocations, all to children under age 5, and 10 cases of poisoning, most often to children under age 5.

It is apparent that home is not the place of safety and refuge it should be, at least for the very young and very old.

The distribution of motor vehicle accidents, of which there were 152, includes: fatal injury to pedestrian, 55; collision with fixed object, 33; collision with other vehicle, 30; noncollision, 8; and fatal injury to pedal cyclist, 2. Grouped by ages, they were heaviest (43) in ages 25 to 44 and somewhat balanced (about 30 each) in age groups 15 to 24 and 45 to 64.

There were 104 fatal accidents in public areas, among them 56 falls (almost all to older persons) and 15 cases of drowning. Among 21 fatal accidents at places of work there were 13 in building and construction, 3 in public utilities, and 2 in service trades.

It is not possible to say that a certain percentage of all these accidents could have been avoided; but it is necessary to say that greater care, caution and understanding could certainly have reduced this total; and the tragedy in many instances is that the victim of a fatal accident is so often not the person causing it. This is especially true when the victim is a child or infant.

The Department of Public Health is working with community groups, local agencies and the professions to develop programs which will be effective in reducing this toll. Public health education leading to greater public awareness is one method. This in turn should encourage a stronger sense of personal responsibility for safety and accident prevention.

Murray Grant, M.D., D.P.H.
D. C. Director of Public Health

Use of the Hospital Emergency Room

A Policy Statement of the Medical Society of the District of Columbia*

(a) When a person comes to an emergency room, every effort should be made to notify his or her physician, or if he has no physician, to contact the staff physician on call at that time.

(b) If the patient's physician is contacted and his instructions to the house staff for emergency care are a part of or a follow-up to previous treatment, the physician may in all propriety make a charge since he has and continues all responsibility for his patient's care.

(c) If the patient's physician is contacted and his instructions to the house staff for emergency care are confined to the emergency only and are not a part of continuing care, no charge for this service should be made by him.

(d) If the patient's physician is not available immediately, the staff physician on call should be contacted for instructions. No charge should be made for this service if the instructions are given by telephone. If the staff physician on call must personally attend the case, he may submit a bill for his services. In either event the patient's physician should be notified and he should assume responsibility for care as soon as possible.

(e) If the patient has no physician, the staff physician on call assumes responsibility until the patient selects a physician. Be guided by (d) in determining charges.

(f) Whenever the patient has a private physician the emergency services of the house staff or staff physician on call should be limited to those necessary to the emergency pending the arrival of the patient's physician.

(g) Every physician should respond personally as soon as possible to emergency calls involving his patients and requiring more than O.P.D. attention; he should not leave definitive treatment to the house staff or staff physician on call.

(h) Finally, judgment and discretion are always required in making charges in emergency situations. Patient care is the primary concern, physician-patient relations is next in importance, and other considerations must be related to these.

---

* Submitted by the Committee on Medical Ethics and Professional Conduct and approved by the Executive Board.

TOPICAL TREATMENT

PRIMARY PYODERMA

TYPICAL RESULTS

AFTER TREATMENT WITH
'NEOSPORIN' ANTIBIOTIC OINTMENT
AND SALINE COMPRESSES

with 'NEOSPORIN'® brand

Polymyxin B-Neomycin-Bacitracin
ANTIBIOTIC OINTMENT

Each gram contains:
'Aerosporin'® brand Polymyxin B Sulfate .... 5,000 Units
Zinc Bacitracin .... 400 Units
Neomycin Sulfate (equivalent to 3.5 mg. Neomycin Base) .... 5 mg.
Tubes of ½ oz. and 1 oz.

clinically effective

comprehensive bactericidal action against most Gram-negative and Gram-positive organisms, including Pseudomonas

rarely sensitizes

For the eradication of infectious organisms in a wide range of dermatologic disorders: impetigo, ecthyma, pyodermas, sycosis vulgaris, paronychia, traumatic lesions, eczema, herpes and seborrheic dermatitis. Prophylactically, for protection against bacterial contamination in burns, skin grafts, incisions and other clean lesions, abrasions and minor cuts and wounds.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs.

Contraindication: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, New York

istent insomnia

chronic fatigue—lethargy

when emotionally based complaints fit the symptom profile of depression

severe anorexia—weight loss

recurrent G.I. upset

nical Considerations: **Contraindications**—Glaucoma, urinary retention, bone marrow depression, pregnancy, drug-induced CNS depression. **Precautions**—The same
ose for the two components, perphenazine and amitriptyline. Use carefully in patients with histories of convulsive disorders or adverse reactions to phenothiazines. Etra
tentiates effects of antidepressants, CNS depressants, atropine, phosphorous insecticides, and heat. The antiemetic effect of the perphenazine component may conc
stence of brain tumor, intestinal obstruction, or toxicity due to overdosage of other drugs. Consider the possibility of potentiation in combined use with MAOI drugs. G
lly allow two weeks between therapies. Not recommended for use in children. **Warning:** Patients who become drowsy with Etrafon should be cautioned against drivin
or operating machines requiring alert attention. Response to alcohol may be potentiated. **Side Effects**—Similar to those reported following the use of either compon
en used alone. For perphenazine alone, side effects caused by any of the phenothiazines may occur. These include extrapyramidal symptoms, autonomic reacti
cluding hypertension), blood dyscrasias, liver damage, endocrine disturbances, allergic reactions, peripheral and cerebral edema, reversed epinephrine effect, grand
ıvulsions, polyphagia, reactivation of psychotic processes. For amitriptyline alone, drowsiness, hypotension, numbness and tingling of extremities, transient confusion
h dosages), activation of latent schizophrenia (although perphenazine in Etrafon may prevent this reaction in some cases). Dose-related anticholinergic reactions are
le. Rare appearance of agranulocytosis, jaundice, and peripheral neuropathy, all possibly of drug origin, have been reported in patients receiving amitriptyline. For m
nplete details, consult Schering literature available from your Schering Representative or Medical Services Department, Schering Corporation, Union, New Jersey 07
Lehmann, H. E.: Psychosomatics *6*:266, 1965. (2) Splitter; S. R.: Psychosomatics *6*:322, 1965. (3) Smith e Incas, J.: Internat. J. Neuropsychiat. *1*:220, 1965. (4) Coffee, H
M. A. Georgia *53*:107, 1964. (5) Bowes, H. A.: Psychosomatics *5*:44, 1964. (6) Pennington, V. M.: Combined Psychopharmacological Treatment of Depression, Scien
hibit, 18th A.M.A. Clinical Convention, Miami Beach, Nov. 29-Dec. 2, 1964. (7) Dorfman, W.: Psychosomatics *5*:7, 1964. (8) Mattey, W. E.: Current Therap. Res. *5*:310, 19

Scheri

new
Etrafon
elps
estore the
ppetite for
ife

ı the patient's symptom pattern and the absence of physical findings confirm your suspicion of a depressive state, ETRAFON wil ly reverse the mental and functional slowdown—and allay the anxiety that accompanies depression. *"...it is rare to find a depressec nt who does not also present definite symptoms of anxiety."*[1]

ıpt symptomatic response: Somatic and ional target symptoms are reported to nd promptly.[2-4] Insomnia, often the important complaint in depression, is first to be relieved.[2] (Bowes[5] found that ransient drowsiness sometimes caused TRAFON was generally beneficial to nts.)

*ON offers the flexibility and convenience of 2 onal dosage strengths: (1) For more severe cases redominant anxiety—*ETRAFON-FORTE *(amitrip- HCl 25 mg. and perphenazine 4 mg.); (2) for cent or geriatric patients—*ETRAFON-A *(amitrip- HCl 10 mg. and perphenazine 4 mg.).* S-915

More certain broad-spectrum relief: ETRAFON is a broad-spectrum psychotherapeutic agent, capable of symptomatic relief not achieved with either drug alone in mixed emotional disorders. Pennington[6] states: "Since neurotic and psychotic anxiety and depression are simultaneously present in varying degrees, these two types of phrenotropic drugs in combination are more effective than either alone." Dorfman[7] and Coffee[4] report that patients unimproved on amitriptyline alone have responded to the combined therapy.

Low incidence of side effects: Mattey[8] reports that with ETRAFON "Side effects are relatively few...." Another investigator[2] states that side effects with amitriptyline-perphenazine combination are less than with each component alone. In Pennington's study of 428 patients, side reactions were less than half as frequent with ETRAFON as with perphenazine alone, toxicity was low, and the absence of extrapyramidal symptoms was regarded as "...particularly noteworthy."[6]

NEW ETRAFON

brand of antidepressant-tranquilizer

amitriptyline hydrochloride 25 mg. and perphenazine 2 mg.

natomy of
ow Back Pain #1
the sedentary life
is often the seat of
low back pain

The human spine is not engineered for prolonged sitting at desks, pianos, typewriters and drafting boards. The stresses set up by the heavy, forward-tilted head and trunk, balanced precariously on an insufficient base, result in strain of the dorsal musculature, particularly at the low lumbar level.

The unusual muscle-relaxant and analgesic properties of 'Soma' make it especially useful in the treatment of low back sprains and strains. 'Soma' is widely prescribed **☐ to relieve pain ☐ to relax muscles ☐ to restore mobility.**

Indications: 'Soma' is useful for management of muscle spasm, pain, and stiffness in a variety of inflammatory, traumatic, and degenerative musculoskeletal conditions. It also may act to normalize motor activity in certain neurologic disturbances.

Contraindications: Allergic or idiosyncratic reactions to carisoprodol.

Precautions: 'Soma', like other central nervous system depressants, should be used with caution in patients with known propensity for taking excessive quantities of drugs and in patients with known sensitivity to compounds of similar chemical structure, e.g., meprobamate.

Side Effects: The only side effect reported with any frequency is sleepiness, usually on higher than recommended doses. An occasional patient may not tolerate carisoprodol because of an individual reaction, such as a sensation of weakness. Other rarely observed reactions have included dizziness, ataxia, tremor, agitation, irritability, headache, increase in eosinophil count, flushing of face, and gastrointestinal symptoms.

One instance each of pancytopenia and leukopenia, occurring when carisoprodol was administered with other drugs, has been reported, as has an instance of fixed drug eruption with carisoprodol and subsequent cross reaction to meprobamate. Rare allergic reactions, usually mild, have included one case each of anaphylactoid reaction with mild shock and angioneurotic edema with respiratory difficulty, both reversed with appropriate therapy. In cases of allergic or hypersensitivity reactions, carisoprodol should be discontinued and appropriate therapy initiated. Suicidal attempts may produce coma and/or mild shock and respiratory depression.

Dosage: Usual adult dose is one 350 mg. tablet three times daily and at bedtime.

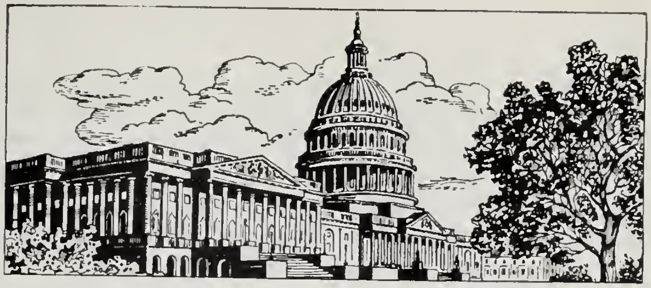
Supplied: Two Strengths: 350 mg. white tablets and 250 mg. orange, two-piece capsules.

Before prescribing, consult package circular.

for the relief of low back sprains and strains

SOMA®
(CARISOPRODOL)

Wallace Laboratories, Cranbury, N.J.
26S01J



NEWS & PERSONALS

Summary of Executive Board Actions

The Executive Board of the Medical Society of the District of Columbia met for dinner at 6:30 p.m. in Parchey's Restaurant, January 24, 1966, following which Dr. J. Spencer Dryden, the new Chairman, presided over the meeting. Present were Drs. C. Willard Camalier, Jr., Robert J. Coffey, Karl C. Corley, Henry D. Ecker, Claudine M. Gay, Raymond T. Holden, Edward W. Nicklas, Lawrence A. Rapee, Paul R. Wilner, and Mr. George W. Cooley, Secretary. Also present were Dr. Frank S. Pellegrini, Chairman of the House and Building Fund Committee, Dr. Robert H. Parrott, Chairman of the Committee on Child Welfare, and Mr. Warren Magee, the Society's legal counsel.

Committee Meetings: The Secretary reported that the following committee meetings had been held since the Board last met:

December 8 Board of Credentials
10 Liaison Committee with Medical Schools and Hospitals
13 Committee on Hospital Utilization
14 Grievance Committee
14 Committee on Alcoholism
16 Traffic Committee

Board of Credentials: On recommendation of the Board of Credentials, the Board approved the following applicants for membership and changes in membership status:

Active Members

Basdeo Balkissoon, 1248 Monroe Street, N.E.
Eugene J. Chap, 1830 K Street, N.W.
Donald H. Glew, Jr., 2300 K Street, N.W.
David A. Hiles, Children's Hospital
Leroy Jones, 330 Stanton Road, S.E.
James B. Moffett, 2121 Pennsylvania Avenue, N.W.
David H. Pendergrast, Freedmen's Hospital
Elijah W. Titus, Jr., 2520 L Street, N.W.

Resident-Intern Members

Don R. Johnson, Washington Hospital Center
Marianne I. Schuelein, Georgetown University

Transfers

Active to Associate:* Dan G. Albert, Robert E. duPrey, Richard H. Edenbaum, Marion J. Finkel, David Leibovici, Robert R. Montgomery, Harold Orvis, Dee R. Parkinson, George J. Schonholtz, and Henry J. Starr
Active to Special: Abraham Ruchwarger
Associate to Active: Sidney Green and George F. Stevenson
Associate Reinstated to Active: Allen E. Marans
Associate to Resident-Intern: Robert T. Greenfield, Jr.

Resignations

Active: Dimitr Christov, George W. Hardman, Harry J. Kicherer, Jack L. Linden, and Wilbur W. Martin.
Associate: R. Mario Abellera, Stephen W. Dejter, W. Marion Falls, D.D.S., Herbert J. Friedel, Jason Geiger, Hubert B. Haywood, Jr., Donald A. Kellogg, Marvin L. Kolkin, Emmett P. Madigan, Carmon R. Naples, Kenneth C. Nieberg, Jerome R. Pomeranz, James A. Roberts, Kenneth A. Simon, Morton Solomon, Fred L. Soper, Marvin Wadler, and Charles M. Weber.

Walter Freeman had submitted his resignation to the Society, but in view of his "outstanding service to the medical profession and to the Medical Society" the Board voted that he be invited to become a Life member since he meets the requirements of Life membership.

The Secretary presented a list of those physicians who had not paid their dues for 1965 and who would, therefore, in accordance with the

---

* The Board members agreed that, henceforth, requests from members for transfer from Active to Associate with the purpose of joining a Society elsewhere be granted providing it was ascertained that they did join such Medical Society.

Constitution and By-laws, be automatically dropped from membership. The Secretary was authorized to send a letter by certified mail to each of those listed.

House and Building Fund Committee: Dr. Pellegrini reported on the progress of the new building at 2007 Eye Street, N.W. The Board voted to hold dedication ceremonies on Sunday, March 13, at 1:00 p.m.

Administration of St. Elizabeths Hospital: A motion was made and carried to approve the recommendation of the Committee on Mental Health, that it oppose at this time any change in the administration of St. Elizabeths Hospital; further, that a liaison group be established between St. Elizabeths Hospital and the Health Department of the District of Columbia to insure more adequate communication.

Committee on Child Welfare: Dr. Parrott was present, on recommendation of the Committee on Child Welfare, to secure approval of a proposed Project Grant by Children's Hospital in reference to health care and services for children and youth of school age and preschool age. The Board approved the proposal by Children's Hospital, including the comments of the Committee, as follows:

1. The proposal appears to fulfill a need for the low-income groups.

2. The language of this proposal and the new provisions of Title V, Part 4 of the Social Security Act do not appear to be in conflict with the existing practice of medicine and do not intend to replace the physician-patient relationship wherever this relationship can be maintained on a normal basis.

3. This proposal may be accomplished in stages in order that the proper medical personnel and paramedical personnel may be adequately trained for the requirements of the program.

4. Consideration may be given to the enlarging of the funds for staffing a coördinating unit.

Burial of Deceased Member: Mr. Magee reported on the efforts made to keep Dr. Robert Sterling McGrath's body from being buried in a public cemetery. Dr. McGrath had died in his home and was found about 1 week later by police. At the request of numerous physicians, the Executive Director and Mr. Magee sought to get the body placed in Arlington Cemetery and to locate relatives, since none seemed to be in this area.

Ad Hoc Committee re Employment of Full-time Surgeon by State Department: At the request of the Executive Board, a special committee of the Board reviewed a request from the State Department in reference to the employment of a full-time staff surgeon. This Committee, composed of Drs. Nicklas, Wilner, Holden and Camalier, met with Dr. Louis K. Woodward (State Department representative) and Dr. David Wherry on January 12. It was the consensus of the Committee that the projected plan would interfere with the exercise of freedom of choice of physician by patient if he elects to utilize this choice. It is suggested that the use of consultants by this Agency for the rendering of good medical opinion and care is approved and desirable. It is also the opinion of this Committee that the best interests of the patient could be served by the establishment of a mutually acceptable panel of surgeons who could be oriented to State Department Foreign Service problems through orientation conferences. No bar should be condoned to continued freedom of patients to choose their own physician for care.

The conclusions of the Committee were approved and it was voted to notify Dr. Woodward of this action and to commend him for approaching the Medical Society for its advice and suggestions relative to this matter.

Federal Employees' Health Services: At the request of the Executive Board, the Committee on Liaison with Federal Agencies made a special study of the expanding Federal Employees' Health Services. It was the recommendation of the Committee that the Executive Board contact the U. S. Civil Service Commission and the Public Health Service and "recommend that there be appointed a medical body with authority to supervise the health programs of all Federal governmental agencies and that this body should logically be a unit of the U. S. Public Health Service." The Board approved this recommendation and voted to commend the Committee for its report.

New Council and Committee Members: Dr. Coffey reported on his appointees to the 7 Councils and the 39 committees under these Councils. He reviewed briefly some of the changes that he had made in committee structure, the main one being the creation of a committee entitled Committee on Federal and District Health Programs, with Dr. Darrell C. Crain as Chairman. Under this Committee were placed 4 subcommittees: (a) Liaison with Public Health Department, (b) Hospital Utilization, (c) Extended Care and Home Care (formerly the Committee on Aging), and (d) Regional Programs on Heart Disease, Cancer and Stroke. All of these have direct interest in the new programs adopted last year by Congress.

The new Council and Committee appointees and revisions in committee structure were approved.

Other Business

Relative Value Schedule: The Secretary reported that the results of the mailing of the Schedule to all voting members were: 339 approvals and 37 disapprovals. It was agreed to proceed with the publishing of the Schedule as the Relative Value Schedule of the Medical Society of D. C. (revised from the 1959 Schedule).

Public Relations Consultant: The question of reimbursement for 1966 for Mr. Lou Brott as public relations consultant to the Society was discussed. The Secretary was instructed to notify Mr. Brott of the conditions for reimbursement that are believed to be in the best interests of the Society and to discuss these with Mr. Brott in the near future.

The Secretary read a letter from Dr. William H. Cooper in reference to the **District of Columbia Political Action Committee.** This letter, requested by the Board at its meeting on December 20, will be photocopied and sent to each member of the Executive Board.

Section on Radiology: The Secretary read a letter from the Section on Radiology signed by Eugene J. McDonald, Chairman, and George T Henesy, Secretary-Treasurer, regarding the relationship of radiologists to the Medicare Program enacted by Congress. The letter requested approval of separate billing for professional services by radiologists and requested that whatever the Board adopted be made known to the Metropolitan Area Hospital Council and also to local hospital administrators.

1965 Assembly Income and Expense: The Secretary reviewed briefly an estimation of the income and expense for the Assembly for 1965 and compared the figures with those for the 1963 and 1964 Assemblies.

1967 Assembly: The Secretary reported that all November dates were taken for 1967 at both the Statler and Washington Hilton Hotels except the dates prior to Thanksgiving or the same dates used in 1965. These dates are being held temporarily at the Statler, pending the decision of the Committee. He also pointed out that on several occasions the idea had been discussed of asking the Sections to participate in the Assembly, permitting each of 8 to 10 Sections to present half-day programs. These could be held in the Medical Society Building without the problems involved in having exhibits. The Chairman of the Executive Board was authorized to make contact with the Sections in reference to such a plan, probably through the Council on Sections, of which Dr. Holden is Chairman.

There being no further business, the meeting was adjourned.

Meetings

A contemporary **Medical Seminar on Sexual and Family Life Problems in Obstetrics and Gynecology** will be held, Saturday, March 26, to highlight the 100th Anniversary Observance of Columbia Hospital for Women. Sessions of the Seminar will convene in the new D. C. Medical Society Building, 2007 Eye Street, N.W.

Dr. Allan Guttmacher, President of Planned Parenthood-World Population, will serve as moderator of the Seminar. Out-of-town speakers will include Dr. Wilfred Abse, of the University of Virginia School of Medicine; Dr. Jack Lippes, Medical Director of Planned Parenthood, of Buffalo, N. Y.; Dr. Clark E. Vincent, of Bowman Gray School of Medicine, Winston-Salem, N. C.; and Mrs. Ethel M. Nash, President of the American Association of Marriage Counselors. Dr. Raymond T. Holden, Chairman of the AMA's Committee on Human Reproduction, and Dr. John J. Kuhn, Chief of Staff at Columbia Hospital, will also participate in the Seminar, which is being chaired by Dr. Jed W. Pearson.

A Postgraduate Course on Pediatric Allergy will be presented at Children's Hospital of the District of Columbia, May 25, 26 and 27, in conjunction with the Departments of Pediatrics of George Washington University and Georgetown University Schools of Medicine. The Course will include practical immunology and allergy for the physician caring for children.

Dr. Saul Krugman, Professor and Chairman of the Department of Pediatrics at New York University, will deliver the Eleventh Annual Joseph Wall Memorial Lecture on "Changing Patterns of Infectious Diseases."

Please address communications to Dr. William A. Howard, Postgraduate Program, Children's Hospital of D. C., Washington, D. C. 20009.

Night Leg Cramps...
Frequent Bedfellow in Diabetes, Arthritis, and Peripheral Vascular Disorders*

*"Nocturnal cramps occurring in the calf muscles and small muscles of the feet have been encountered in a significant number of diabetic patients."[1]

". . . nocturnal cramps may be the presenting symptoms of patients with arteriosclerosis obliterans, deep thrombophlebitis, varicose veins, osteoarthritis . . ."[2]

now... specific therapy for night leg cramps

QUINAMM™

Consistently effective, QUINAMM provided complete relief in 94% of 200 patients studied, many of whom were severe cases refractory to other medication.[3] Your prescription for one tablet at bedtime often controls painful night cramps with the initial dose . . . helps restore restful sleep.

QUINAMM Prescribing Information: Composition: quinine sulfate 250 mg. and aminophylline 200 mg. per tablet. **Precautions:** aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue if ringing in the ears, deafness, skin rash or visual disturbances occur. Since Quinamm contains quinine sulfate, caution should be observed regarding administration during pregnancy. Dosage: 1 tablet three or four times daily. For nocturnal leg cramps, 1 tablet on retiring.

References: 1. Shuman, C.: Am. J. Med. Sci., 225:54, 1953. 2. Perchuck, E., et al.: Angiology, 12:102, 1961. 3. Rawls, W., et al.: Med. Times, 87:818, 1959.

WALKER Laboratories Division of Richardson-Merrell Inc. Mt. Vernon, New York 10551

Georgetown University School of Medicine will conduct a short-term training course for physicians on "The Management of the Chronic Disease Patient," June 9 and 10. There will be 2 all-day meetings with a dinner and evening program on June 9. Registration is limited, but there is no fee. Application should be made to Dr. Margaret M. Kenrick, 3800 Reservoir Road, N.W., Washington, D. C. 20007.

The Medical and Chirurgical Faculty of the State of Maryland will hold its **168th Annual Meeting,** April 27 and 28, at The Alcazar in Baltimore. Speakers will be present from Columbia University, the Rockefeller Institute, George Washington University, John Hopkins University, the National Institutes of Health, Vanderbilt University, University of Chicago, University of Maryland, and Harvard Medical School. The program has been approved for credit by the American Academy of General Practice. A complete program may be secured by writing to Dr. John Collins Harvey, Chairman of the Committee on Programs and Arrangements, 1211 Cathedral Street, Baltimore, Md. 21201.

Following the meeting the Maryland Society is sponsoring a Bermuda Cruise Convention aboard the *S. S. Argentina*, April 29–May 4.

Physicians and paramedical personnel are invited to attend the Scientific Sessions and the Bermuda Cruise.

General News

The new Eugene Meyer Pavilion of George Washington University Hospital was dedicated, January 21. A memorial to the late Chairman of the Board of *The Washington Post*, the 5-story Pavilion was financed by gifts from Mrs. Agnes E. Meyer, the Meyer Foundation, the University, Federal funds, and donations from benefactors and sponsors of the University.

Mrs. Meyer was present at the dedication services and spoke along with the Honorable John McCormack, Speaker of the House of Representatives; Senator Alan Bible, of Nevada; Under Secretary Wilber J. Cohen, of the Department of Health, Education, and Welfare; and Dr. Lloyd H. Elliott, President of the University, and Dr. John Parks, Dean of the School of Medicine.

The Pavilion joins 2 wings of the Hospital and provides an 18-bed area where patients can get the careful monitoring necessary for research projects. It will provide an in-out surgical service which will relieve many patients the expense and inconvenience of staying even a single night in the Hospital.

The present Hospital is also being remodeled and centrally air-conditioned as new areas are made available. The total project, to cost approximately $7,500,000, is due for completion in about 18 months, at which time the full bed capacity is expected to be 540, with a large increase in laboratory space and X-ray area plus additional equipment and improved supporting facilities.

The National Association of Blue Shield Plans will sponsor again the **Norman A. Welch, M.D. Memorial Award** program. The award will be made to the author of the most scholarly and meritorious contribution to the literature of medical economics between July 1, 1965 and June 30, 1966. It can be an article or series of articles, a book, or a published or delivered speech.

The award consists of a gold medallion and $1,000 which will be contributed in the author's name to the Norman A. Welch, M.D. Memorial Fund of the American Medical Association Education and Research Foundation. Entries should be submitted to the Library, National Association of Blue Shield Plans, 425 North Michigan Avenue, Chicago, Ill. 60611. Deadline for entries is September 1.

The American Geriatrics Society has announced the renewal of three $1800 grants to encourage resident physicians to devote more time to the study of the medical problems of the aging. The grants will supplement the salaries paid to resident physicians while they continue their medical education. The Lederle Residency Supplements, made possible by Lederle Laboratories, will cover the period between July 1966 and June 1967.

Application for the grants should be addressed to the Chairman, Fellowship Committee, American Geriatrics Society, 10 Columbus Circle, New York, N. Y. 10019. Deadline for applications is June 1, 1966.

Two nearby medical societies in Northern Virginia have new officers as of January 1. Serving the **Fairfax County Medical Society** are:

Dr. Robert L. Guillaudeu, *President*; Dr. Edward J. Gallagher, *President-elect*; Dr. C. Barrie Cook, *Vice President*; Dr. Mario E. Espinola, *Secretary*; and Dr. M. Mendel Bocknek, *Treasurer*.

New officers of the **Alexandria City Medical Society** are:

Dr. Robert H. Anderson, *President*; Dr. M. Hayne Kendrick, *President-elect*; Dr. William N. Elam, *Vice President*; Dr. Robert L. Adeson, *Secretary*; and Dr. Ira J. Green, *Treasurer*.

Dr. Cook and Dr. Kendrick are Associate members of the D. C. Medical Society.

A Forum for Professionals and Executives at the Washington School of Psychiatry has been organized to demonstrate the continuing and valuable contribution that retired people can make to society. The organization, formed about a year ago, seeks to utilize the experience and talents of retirees and those about to retire in constructive action. Community and national problems and issues are discussed in seminars, and committees are created to study, recommend and undertake action in such specific fields as education, Social Security, communication across cultural barriers, arts and sciences, and improvement of nursing homes.

The Forum is sponsored by the Study Center of the Washington School of Psychiatry, where it holds its meetings in Sullivan Hall, 1610 New Hampshire Avenue, N.W. To defray operational expenses there is an annual registration and membership fee of $25. Inquiries may be addressed to the Dean of the Forum at the School; telephone, North 7-3008.

A national, nonprofit **Dermatology Foundation** has been formed with endorsement from the American Academy of Dermatology, American Dermatological Association, and the Society for Investigative Dermatology. The Executive Director is Mr. Gerard W. Speyer, with offices at 420 Lexington Avenue, New York, N.Y. 10017.

Georgetown University Medical Center has received another grant of $278,051 over a 3-year period from the John A. Hartford Foundation to further its Kidney Research Program. The new grant brings to over $1,000,000 that this Foundation has given in support of the Center's renal research program since 1955. Administering the grant will be Dr. George E. Schreiner, Professor of Medicine at the Center.

The National Institute of Mental Health announces the release of 2 publications of interest to members of the medical profession. The first, a 20-page pamphlet, called **"Mental Illness and Its Treatment—Past and Present"** (No. 1345), traces the historical development of man's recognition of and reaction to the problems of defective behavior among members of his social community. Single copies may be obtained free of charge from the Public Health Service, Washington, D. C. 20201.

The second, a 125-page publication, entitled **"Current Research on Sleep and Dreams"** (No. 1389), reports on the state of knowledge today regarding the mental and physical aspects of sleep and dreaming. Single copies may be obtained without charge from the Public Information Section, National Institute of Mental Health, Bethesda, Md. 20014.

Dr. H. Martin Engle has been appointed to serve as **Head of the Department of Medicine and Surgery at Veterans Administration.** He succeeds Dr. Joseph H. McNinch, who retired as the VA's Chief Medical Director on January 1.

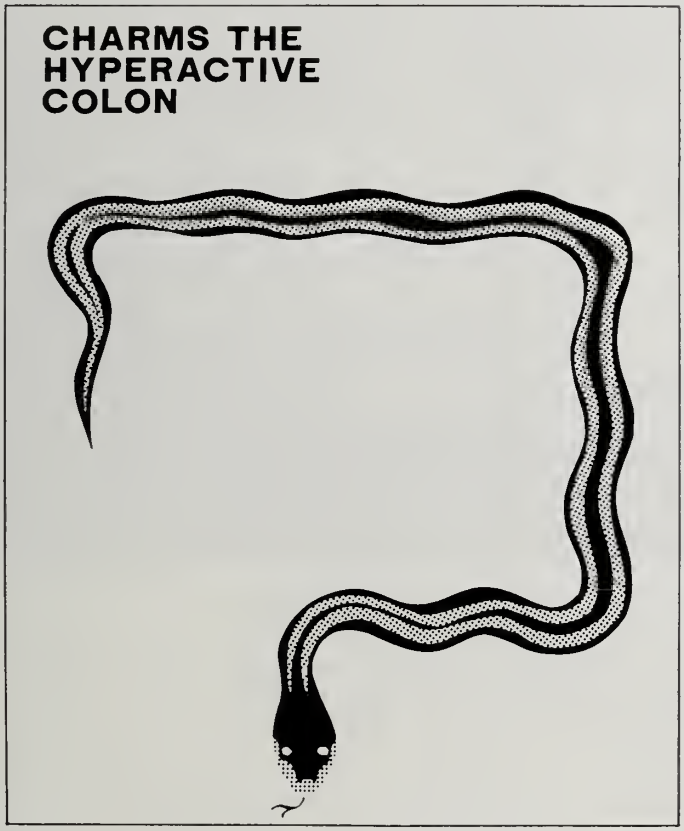
Dr. Engle is the first VA career officer to be named Chief Medical Director of the Agency. He received his medical degree from the University of Illinois in 1939. From 1942 to 1946 he served with the Army Medical Corps in World War II, attaining the rank of Major, and joined the VA following his discharge in 1946. He came to Washington in 1960 when he was appointed Deputy Chief Medical Director.

Dr. James L. Goddard, Assistant Surgeon General of the U.S. Public Health Service, is the new **Commissioner of the Food and Drug Administration.** Announcement of the appointment was made by President Johnson, January 10. Dr. Goddard succeeds Commissioner George P. Larrick, who retired, December 27, after serving the FDA and a predecessor agency for 42 years and as Commissioner since 1954.

Dr. Goddard comes to his new post after serving as Chief of the Communicable Disease Center at Atlanta, Georgia, since 1962. A graduate of George Washington University School of Medicine, he has spent 14 years in the public health field.

Dr. Ralph L. Morris succeeds Dr. James E. Banta as **Director of the Peace Corps Medical Program Division.** Dr. Banta is now with the Office of International Health Research at the National Institutes of Health. Dr. Morris graduated in medicine from the University of Washington, Seattle, in 1960. He joined the Peace Corps in 1962 and served last year as Deputy Director of the Medical Program Division.

"In 40 of 44 cases of irritable or spastic colon, Cantil [mepenzolate bromide] or Cantil with Phenobarbital reduced or abolished abdominal pain, diarrhea and distention and promoted restoration of normal bowel function . . . Cantil [mepenzolate bromide] proved to be singularly free of anticholinergic side-effects . . . Urinary retention, noted in two cases was eliminated in one by reducing dosage."[1]



CANTIL®

(mepenzolate bromide)

helps restore normal motility and tone

IN BRIEF:

One or two tablets three times a day and one or two at bedtime usually provide prompt relief. Cantil with Phenobarbital may be prescribed if sedation is required.

Dryness of the mouth or blurring of vision may occur but it is usually mild and transitory. Urinary retention is rare. Caution should be observed in prostatic hypertrophy—withhold in glaucoma. Cantil with Phenobarbital is contraindicated in patients sensitive to phenobarbital.

Supplied: CANTIL (mepenzolate bromide) —25 mg. per scored tablet. Bottles of 100 and 250. CANTIL with PHENOBARBITAL —containing in each scored tablet 16 mg. phenobarbital (warning: may be habit forming) and 25 mg. mepenzolate bromide. Bottles of 100 and 250.

1. Riese, J.A.: Amer. J. Gastroent. **28**:541 (Nov.) 1957

LAKESIDE LABORATORIES, INC., Milwaukee, Wisconsin 53201

LAKESIDE

PRODUCTS
FOR PATIENTS
YOU SEE
EVERY DAY

THE GIBSON COMPANY
60 years serving the medical profession
922 19th Street, N.W.
Federal 8-2688
Medical and Surgical Supplies
Hospital, Invalid and Sickroom Supplies
Surgical Fitting Specialists—Man and Woman
Private Fitting Rooms

Mr. C. Joseph Stetler has succeeded Dr. Austin Smith as **President of the Pharmaceutical Manufacturers Association.** Dr. Smith submitted his resignation at the meeting of the Board of Directors of PMA in Chicago, December 7, 1965, and announced that he had accepted the position of Vice Chairman of the Board of Directors of Parke, Davis and Company of Detroit. Mr. Stetler has been serving as Executive Vice President and General Counsel of the Association.

Personals

Dr. Roger Baker has been appointed by the Surgeon General of the Public Health Service to the Kidney Disease Project and Program Review Committee for a 2-year term. This Committee reviews applications for Federal support of program projects in all types of renal disease including chronic hemodialysis. Dr. Baker, who is Professor and Director of the Division of Urology at Georgetown University, is the only urologist on the Committee and the only representative from the Washington Area.

Dr. Richard E. Palmer, of Alexandria, an Associate member of the D. C. Medical Society, succeeds Dr. W. Andrew Bunten, of Cheyenne, Wyoming, on the Board of Commissioners for the Joint Commission on Accreditation of Hospitals.

Dr. Raymond Feldman has been named Director of the General Practitioner Education Project of the American Psychiatric Association, effective January 3. Dr. Feldman recently retired from Federal employment after more than 30 years' service, most recently in the post of Deputy Director of the National Institute of Mental Health. He is Clinical Associate Professor of Psychiatry at Georgetown University and an Associate member of the D. C. Medical Society.

Dr. Ralph G. Beachley has been appointed by Governor A. S. Harrison of Virginia to the statewide Advisory Committee for planning Regional Programs on Heart Disease, Cancer and Stroke in Virginia, under the terms of Public Law 89-239. Dr. Beachley, who retired in July, 1965 as Director of Public Health in Arlington County, is Executive Secretary of the Medical Alumni of George Washington University.

Dr. Roger Baker and Dr. Philip L. Calcagno, who head the Departments of Urology and Pediatrics, respectively, at Georgetown University, will be in charge of a newly established Pediatric Community Kidney Disease Prevention Center at Georgetown Hospital. The Center has been made possible by a Public Health Service grant in excess of $400,000.

Dr. Baker was recently elected to fellowship in the American Academy of Pediatrics.

Dr. Harold Stevens succeeded Dr. P. S. Constantinople as President of the Doctors' Symphony Orchestra, January 1.

Dr. William C. Swatek, pathologist and Director of Laboratories at the Washington Sanitarium and Hospital, has been elected President of the Hospital's medical staff. He succeeds Dr. William W. Eastman, who served as President for 2 years. Both are Associate members of the D. C. Medical Society.

Dr. John W. Roark, also an Associate member of the Society, has been chosen President of the medical staff of Alexandria Hospital.

Dr. Lawrence J. Thomas is serving this year as President of the Medical Students' Aid Society of Phi Lambda Kappa Medical Fraternity.

Two members of the D. C. Medical Society were elected officers of the Barney Neighborhood House at the meeting of its Board of Trustees, January 12. **Dr. Stanley J. Talpers** was elected First Vice President **and Dr. E. H. Cushing,** Treasurer.

Dr. Seymour Alpert is serving a second term as President of the United Jewish Appeal of Greater Washington.

Dactilase
LAKESIDE

more complete relief for the "dyspeptic"

DACTILASE®

Dactilase provides comprehensive therapy for a wide range of digestive disorders. Its antispasmodic and anesthetic actions rapidly relieve pain and spasm. Dactilase decreases hypermotility without inducing stasis. In addition, it supplies digestive enzymes to help reduce bloating, belching and flatulence. Dactilase does not interfere with normal digestive secretions. Very often it can be a most useful answer to the dyspeptic's needs.

DACTILASE: Each tablet contains: Dactil® (piperidolate hydrochloride), 50 mg.; Standardized cellulolytic* enzyme, 2 mg.; Standardized amylolytic enzyme, 15 mg.; Standardized proteolytic enzyme, 10 mg.; Pancreatin 3X** (source of lipolytic activity), 100 mg.; Taurocholic acid, 15 mg.

*Need in human nutrition not established. **As acid resistant granules equivalent in activity to 300 mg. Pancreatin N.F.

Side Effects and Contraindications: DACTILASE is almost entirely free of side effects. However, it should be withheld in glaucoma and in jaundice due to complete biliary obstruction.

Administration and Dosage: One tablet with, or immediately following each meal. Tablets should be swallowed whole.

Supplied: Bottles of 60 and 250.

LAKESIDE LABORATORIES, INC.
Milwaukee, Wisconsin 53201

Woman's Auxiliary Notes

Report of Committee on Mental Health

In October, 1962 the American Medical Association formally and officially recognized the seriousness of mental illness as our Nation's most forbidding health liability when it said: "Mental illness is America's most pressing and complex health problem. The American Medical Association recognizes the important stake that every physician, regardless of type of practice, has in improving our mental health knowledge and resources. The American Medical Association has a deep interest in fostering a general attitude, within the profession and among the lay public, more conducive to solving the many problems now existing in the mental health field."

Since mental health is the greatest single health problem, it is at the community level that education and promotion of mental health can be most effective. How effectively can we as an Auxiliary work on mental health problems? Of the many worthwhile endeavors that are available and in need of our assistance, choices have to be made. To help implement the community mental health services program of the AMA, we hope to prepare a directory of community mental health facilities; we are currently planning to promote a series of records made available for radio called "Mirror to the Mind" during Mental Health Week in Washington; and we are enthusiastically involved in the collection of electrical equipment to be used for rehabilitation purposes at a local mental health center. In the area of volunteer service many Auxiliary members give generously of their time as hospital aides and they assist senior citizens in various ways.

Mrs. Winthrop Rockefeller, President of the National Association for Mental Health, said: "Our most valuable asset and most treasured possession is the human mind." She continued by saying: "If we join together in directing our energies, our efforts, and our funds toward alleviating America's most complex and serious health problem, I am convinced that substantial progress can be made." We, too, think so!

The Mental Health Committee is grateful for the support they have received during the current year. Along with the national drive to make America more beautiful, may we urge you to continue to help promote a more healthy America as well.

Mrs. Charles V. Pate
Chairman, Mental Health Committee

Obituaries

Edgar Snowden, M.D.

(1880–1966)

Dr. Edgar Snowden, a Life member of the Medical Society of the District of Columbia, died, January 5, 1966 at Doctors Hospital after a long illness. He had practiced obstetrics and general medicine in the Washington area until his illness last year. His offices and home were located at 1712 21st Street, N.W., for 45 years.

Dr. Snowden was born in Alexandria, Va., April 2, 1880, to Hubert and Edith Ashby Snowden. He attended the public schools of Alexandria and received his medical degree in 1903 from Columbian (now George Washington) University. He interned at Columbia Hospital for Women, then practiced medicine with the late Dr. Henry Fry for several years before he opened his own private practice.

Dr. Snowden was Associate in Medicine at Emergency Hospital from 1915 to 1925 and Associate in Obstetrics at Columbia Hospital from 1917 to 1930. During World War I he served as a First Lieutenent in the Army Medical Corps. He was a member of the Medical Examiners of D. C. from 1915 to 1918.

A member of the American Medical Association, Dr. Snowden was elected to membership in the Medical Association of the District of Columbia in 1905 and to the D. C. Medical Society in 1907; he became a Life member of the latter in 1946. He was a member of the Alexandria-Washington Masonic Lodge and a Shriner.

Surviving him are his wife, Mrs. Julia Burns Snowden; a daughter, Mrs. Julia Neumeyer, of McLean Va.; and a son, Captain Edgar Snowden IV, of the Army Engineering Corps, stationed in Stuttgart, Germany. He also leaves a sister, Miss Edith A. Snowden, of Alexandria, Va.

Robert Sterling McGrath, M.D.

(1898–1966)

Dr. Robert Sterling McGrath, Washington allergist for many years, died, January 8, 1966 at his home, 4000 Massachusetts Avenue, N.W.

Dr. McGrath, the son of a physician, Dr. Patrick McGrath, and Mrs. Carolyn McGrath, was born in Washington, D. C., January 3, 1898.

when even southern sun
fails to warm cold hands and feet

provide rapid, sustained vasodilation for warmth and relief of pain, dizziness and faintness in patients with impaired peripheral circulation

GERILIQUID warms cold hands and feet through the thermogenic action of glycine and through sustained vasodilation by glycine and niacin. In addition, in patients with impaired peripheral circulation, GERILIQUID increases the ability to walk farther with less pain. Patients particularly like the palatable, sherry wine base.

Geriliquid®

IN BRIEF: Composition: Each 5 ml. contains: niacin 75 mg. and aminoacetic acid (glycine) 750 mg. in a palatable sherry wine base; alcohol 5%.

Side Effects: Occasional lightheadedness or transient itching which may disappear with continued use. There are no known contraindications; however, caution is advised when there is concomitant administration of a coronary vasodilator.

Administration and Dosage: One or two teaspoonfuls 3 times a day before meals. If flushing is objectionable, dosage may be lowered. However, tolerance to flushing usually develops without loss of efficacy in regard to vasodilation.

Supplied: Bottles of 8 oz. and 16 oz.

LAKESIDE LABORATORIES, INC. Milwaukee, Wisconsin 5320

The family moved to the Middle West, and he attended public schools in Chicago. He attended both Northwestern and George Washington Universities, but received his medical degree from Tulane University in 1933. He returned to Washington to intern at Garfield Memorial Hospital the following year. From 1934 to 1935 he was Chief Resident at Eastern Dispensary and Casualty Hospital, then went to New York for training in allergy at the Jewish Hospital in Brooklyn.

Dr. McGrath was on the hospital staff of old Garfield Memorial Hospital as Attending in Allergy and Chief of the Allergy Clinic. He was on the staff of Doctors Hospital at the time of his death.

Dr. McGrath was a Fellow of the American College of Allergists, a member of the American Medical Association, an Active member of the D. C. Medical Society since 1937, and for many years was Secretary of its Section on Gastroenterology. He was a member of the Kober Society and the Louis Mackall Medical Society. He was a veteran of World War I.

He left no immediate survivors.

Leo T. Brown, M.D.

(1900–1966)

Dr. Leo T. Brown, an Active member of the D. C. Medical Society, died, January 15, 1966, at the Washington Hospital Center. He was an internist with a special interest in gastroenterology.

A Washingtonian, he was born, March 14, 1900, to Abraham and Ida Brown. He attended public schools in Washington and the University of Maryland, graduating in medicine from the latter in 1925. He interned for a year at the University Hospital in Baltimore, and from 1926 to 1928 he was associated with Dr. Julius Friedenwald in Baltimore.

Dr. Brown was on the staff of George Washington University Hospital from 1930 to 1942, and was Clinical Instructor in Medicine at George Washington University from 1929 to 1944. At the time of his death he was on the medical staffs of the Washington Hospital Center and Prince George's General Hospital.

In 1929 he was elected to Active membership in the Medical Society of the District of Columbia. He was a member of the D. C. Society of Internal Medicine, the Jacobi Medical Society, and the Pan American Medical Society.

Surviving him are his wife, Mrs. Helen Slaybaugh Brown, of the home address, 1621 New Hampshire Avenue, N.W.; 2 sons, Peter M. Brown, also of the home address, and Henry C. Brown, of 3707 33rd Street, N.W.

Julius John Radice, A.B., M.D.

(1907–1966)

Dr. Julius J. Radice, orthopedic surgeon, died, January 15, 1966, at his home, 6131 Nevada Avenue, Chevy Chase, Md.

Dr. Radice was born to Peter A. and Adeline Radice, July 22, 1907, in Washington, D. C. He attended public schools in Washington and the University of Maryland, where he obtained his Bachelor degree in 1930. He is remembered in Washington as an outstanding athlete at Eastern High School and the University of Maryland.

In 1935 Dr. Radice graduated in medicine from George Washington University. He interned at Emergency Hospital for a year and spent 2 years at the same hospital in resident training. From 1937 to 1938 he was resident in orthopedic surgery at Emergency Hospital and Assistant Surgical Resident from 1938 to 1939.

He was on the attending staff of the Washington Hospital Center, Suburban and Sibley Memorial Hospitals. He was team physician for the St. Alban's School for Boys for the last 25 years.

After being associated in private practice with Dr. Frank M. Hand at 1302 18th Street, N.W. for nearly 20 years, he joined the staff of the Washington Clinic about a year ago.

Dr. Radice was an Active member of the Medical Society of the District of Columbia since 1941. He was a member of the American Medical Association, the Southern Medical Association, and the Washington Orthopedic Society. He also belonged to the "M" Club, Terrapin Club, and the Congressional Country Club.

He leaves his wife, Mrs. Louise Eno Radice, and a son, Peter Radice, of the home address. A sister, Mrs. Milton Magruder, of Washington, also survives him.

Regeneration of Liver—Bremer et al

(Continued from page 119)

2. Islami, A. H., and Pack, G. T.: Amer. J. Roentgen., 1959, **81**, 855.
3. Islami, A. H., Pack, G. T., Schwartz, M. K., and Smith, E. R.: Ann. Surg., 1959, **150**, 85.
4. Pack, G. T., Islami, A. H., Hubbard, J. D., and Brasfield, R. D.: Surgery, 1962, **52**, 617.

WHEN MOTHER'S IRON ISN'T UP TO MOTHERHOOD

IN BRIEF: ACTIONS AND USES: A single dose of Imferon (iron dextran injection) will measurably begin to raise hemoglobin and a complete course of therapy will effectively rebuild iron reserves. The drug is indicated only for specifically-diagnosed cases of iron deficiency anemia and then only when oral administration of iron is ineffective or impractical. Such iron deficiency anemia may include: patients in the last trimester of pregnancy; patients with gastrointestinal disease or those recovering from gastrointestinal surgery; patients with chronic bleeding with continual and extensive iron losses not rapidly replenishable with oral iron; patients intolerant of blood transfusion *as a source of iron;* infants with hypochromic anemia; patients who cannot be relied upon to take oral iron.

COMPOSITION: Imferon (iron dextran injection) is a well-tolerated solution of iron dextran complex providing an equivalent of 50 mg. of elemental iron in each cc. The solution contains 0.9% sodium chloride and has a pH of 5.2-6.0. The 10 cc. vial contains 0.5% phenol as a preservative.

ADMINISTRATION AND DOSAGE: Dosage, based upon body weight and Gm. Hb./100 cc. of blood, ranges from 0.5 cc. in infants to 5.0 cc. in adults, daily, every other day, or weekly. The total iron requirement for the individual patient is readily obtainable from the dosage chart in the package insert. Deep intramuscular injection in the upper outer quadrant of the buttock, using a Z-track technique, (with displacement of the skin laterally prior to injection), insures absorption and will help avoid staining of the skin. A 2-inch needle is recommended for the adult of average size.

SIDE EFFECTS: Local and systemic side effects are few. Staining of the skin may occur. Excessive dosage, beyond the calculated need, may cause hemosiderosis. Although allergic or anaphylactoid reactions are not common, occasional severe reactions have been observed, including three fatal reactions which may have been due to Imferon (iron dextran injection). Urticaria, arthralgia, lymphadenopathy, nausea, headache, and fever have occasionally been reported. Initial test doses of 0.5 cc. are advisable.

PRECAUTIONS: If sensitivity to test doses is manifested, the drug should not be given. Imferon (iron dextran injection) must be administered by deep intramuscular injection only. Inject only in the upper outer quadrant of the buttock, not in the arm or other exposed area.

CONTRAINDICATIONS: Imferon (iron dextran injection) is contraindicated in patients sensitive to iron dextran complex. Since its use is intended for the treatment of iron deficiency anemia only, it is contraindicated in other anemias.

CARCINOGENICITY POTENTIAL: Using relatively massive doses, Imferon (iron dextran injection) has been shown to produce sarcoma in rats, mice and rabbits and possibly in hamsters, but not in guinea pigs. The risk of carcinogenesis, if any in man, following recommended therapy with Imferon (iron dextran injection) appears to be extremely small.

SUPPLIED: 2 cc. ampuls, boxes of 10; 5 cc. ampuls, boxes of 4; 10 cc. multiple dose vials.

in iron deficiency anemia for rapid and predictable replacement of iron reserves

imferon®

(iron dextran injection)

LAKESIDE LABORATORIES, INC. • Milwaukee, Wisconsin 53201

PHYSICIANS' PLACEMENT SERVICE

The Medical Society's **Physicians' Placement Committee** maintains a service to benefit its members and other physicians by locating suitable openings, assistants or associates. It will also assist Government agencies and industrial organizations to secure physicians for their Medical Departments. Call Di 7-3111—ask for Mr. Trust.

5. Gould, E. A.: Personal communication.
6. McDermott, W. V., Greenberger, N. J., Isselbacher, K. J., and Weber, A. L.: Surgery, 1963, **54,** 56.
7. Mann, F. C., Fishback, F. C., Gay, J. G., and Green, G. F.: Arch. Path. (Chicago), 1931, **12,** 787.
8. Cameron, G. R., and Karunaratne, W. A. E.: J. Path. Bact., 1936, **42,** 1.
9. Ferguson, C. C., Rogers, C. S., and Vars, H. M.: Amer. J. Physiol., 1948, **159,** 343.
10. Islami, A. H., Pack, G. T., and Hubbard, J. C.: Cancer, 1958, **11,** 663.
11. Moon, V. H.: Arch. Path. (Chicago), 1934, **18,** 381.
12. Lin, T. Y., and Chen, C. C.: Ann. Surg., 1965, **162,** 959.
13. Fisher, B., Russ, B., Updegraff, H., and Fisher, E. R.: Arch. Surg. (Chicago), 1954, **69,** 263.
14. Mann, F. C.: Surgery, 1940, **8,** 225.
15. MacDonald, R. A., Rogers, A. E., and Pechet, G. S.: Ann. N.Y. Acad. Sci., 1963, **111,** 70.
16. Elias, H. A.: Amer. J. Anat., 1949, **84,** 311.
17. Karsner, H. T.: Amer. J. Clin. Path., 1943, **13,** 569.
18. Moschcowitz, E.: Arch. Path. (Chicago), 1948, **45,** 187.
19. Bunton, G. L., and Cameron, R.: Ann. N. Y. Acad. Sci., 1963, **111,** 412.
20. Bremer, E. H., and Dowli, A.: Amer. Surg., in print.
21. Pack, G. T., and Molander, D. W.: Arch. Surg. (Chicago), 1960, **80,** 175.
22. Islami, A. H., and others: Surgery, 1956, **39,** 551.
23. Grindlay, J. H., and Bollman, J. L.: Surg. Gynec. Obstet., 1952, **94,** 491.
24. Child, C. G. III, Barr, D., Holswade, G. R., and Harrison, C. S.: Ann. Surg., 1953, **138,** 600.
25. Fisher, B., Lee, S. H., Fisher, E. R., and Saffer, E.: Surgery, 1962, **52,** 88.
26. Pack, G. T., and Islami, A. H., in Proc. Third National Cancer Conference. Philadelphia: Lippincott, 1956, p. 819.

Status of Stereotaxic Surgery—Luessenhop, Fox and Kachmann

(*Continued from page 125*)

16. Meyers, R., and others: J. Neurosurg., 1959, **16,** 32.
17. Kjelberg, R. N.: Confin. Neurol., 1962, **22,** 364.
18. Cooper, I. S.: Proc. Roy. Soc. Med., 1959, **52,** 47.
19. Alberts, W. W., and others: J. Neurosurg., 1965, **23,** 174.
20. Krayenbuhl, H., Wyss, O. A., and Yasargil, M. G.: Ibid., 1961, **18,** 429.
21. Hassler, R.: Brain, 1960, **83,** 337.
22. Gortvai, P.: J. Neurol. Neurosurg. Psychiat., 1964, **27,** 585.
23. Rand, R. W.: J. Neurosurg., 1960, **17,** 1093.
24. Cooper, I. S.: J. Neurol. Sci., 1965, **2,** 520.
25. Cooper, I. S.: New Eng. J. Med., 1960, **263,** 441.
26. Rand, R. W., and others: Neurology (Minneap.), 1962, **12,** 754.
27. Obrador, S., and Dierssen, G.: Observations on treatment of intentional and postural tremor by subcortical stereotaxic lesions. Proc. Second International Symposium on Stereoencephalotomy (see ref. 1).
28. van Manen, J.: Indications for stereotaxic operations in cerebral palsy. Ibid.
29. Latimer, L. V.: Early results of stereotaxic treatment for infantile cerebral palsy. Ibid.
30. Heimburger, R. F.: Stereotaxic lesions in dentate nucleus of cerebellum to modify involuntary movement patterns. Ibid.
31. Narabayashi, H., and others: Neurology (Minneap.), 1960, **10,** 61.
32. Narabayashi, H.: Confin. Neurol., 1962, **22,** 364.
33. Handa, H., and others: Ibid., 1962, **22,** 393.
34. Laitinen, L.: Acta Neurol. Scand., 1963, **39** (Suppl. 4), 231.
35. Mark, V. H., Erwin, F. R., and Yakovlev, P. J.: Confin. Neurol., 1962, **22,** 238.
36. Riechert, T.: Acta Neurochir. (Wien), 1960, **8,** 136.
37. Bettag, W., and Yoshida, T.: Ibid., 1960, **8,** 299.
38. Wycis, H. T., and Spiegel, E. A.: J. Neurosurg., 1962, **19,** 101.
39. Foltz, E. L., and White, L. E.: Ibid., 1962, **19,** 89.
40. Hassler, R., and others: Brain, 1960, **83,** 337.
41. Schaltenbrand, G., and Bailey, P., edited by: Introduction to Stereotaxis with an Atlas of the Human Brain, vol. 3. Stuttgart: Georg Thieme Verlag, 1959.
42. Bertrand, G., Blundell, J., and Musella, R.: J. Neurosurg., 1965, **22,** 333.
43. Andy, O. J., Jurko, M. F., and Sias, F. R.: Ibid., 1963, **20,** 860.
44. Spiegel, E. A., and others: Ibid., 1963, **20,** 871.

Myxedema with Pericardial Effusion—Burgerman

(*Continued from page 133*)

28. Marks, D. A., and Roof, B. S.: Ann. Intern. Med., 1953, **39,** 230.
29. Harris, R., and Arvanis, C.: Exp. Med. Surg., 1960, **18,** 47.
30. Gordon, A. H.: Canad. Med. Ass. J., 1929, **20,** 7.
31. Kern, R. A., Soloff, L. A., Snope, W. J., and Bello, C. T.: Amer. J. Med. Sci., 1949, **217,** 609.
32. Weyber, R. F.: J.A.M.A., 1953, **153,** 639.
33. Bell, G. O., and Beck, R. A.: Lahey Clin. Bull., 1953, **8,** 170.
34. Baker, S. M., and Hamilton, J. D.: Lab. Invest., 1957, **6,** 218.
35. Blumgart, H. L., Freedberg, A. S., and Kurland, G. S.: Amer. J. Med., 1953, **14,** 665.

The Medical Society of the District of Columbia

1966

Officers

Robert J. Coffey, *President*
Henry D. Ecker, *President-elect*
Lawrence A. Rapee, *First Vice President*
Claudine M. Gay, *Second Vice President*
Mr. George W. Cooley, *Secretary-Treasurer*

Executive Board

Karl C. Corley (1967)
J. Spencer Dryden, *Chairman* (1966)
Edward W. Nicklas (1968)
Paul R. Wilner (1969)

Ex Officiis

Robert J. Coffey
Raymond T. Holden
Henry D. Ecker
C. Willard Camalier, Jr.
Mr. George W. Cooley, *Secretary*

Board of Credentials

Michael J. McInerney, *Chairman* (1966)
Philip R. James (1966)
Seymour Alpert (1967)
Jack Kleh (1967)
William S. Cole (1968)
Edward E. Ferguson (1968)

Delegates

American Medical Association

Raymond T. Holden
C. Willard Camalier, Jr.
Clifton R. Gruver, *Alternate*
Thomas M. Peery, *Alternate*

Legal Counsel

Mr. Warren E. Magee

Council on Organization and Membership

COMMITTEES

CONSTITUTION AND BY-LAWS

W. LeRoy Dunn, *Chairman*

Milton L. Goldman
Laurence H. Kyle
Petrena Abbe Shea
J. Rogers Young
Harry Zehner, Sr.

HOUSE AND BUILDING FUND

Frank S. Pellegrini, *Chairman*
J. Rogers Young, *Vice Chairman*

Daniel L. Borden
Leon Gerber
John F. Gillespie
Oscar B. Hunter, Jr.
David H. Kushner
Zigmond M. Lebensohn
Arthur H. Lewis
Russell M. Tilley
Mrs. O. Hugh Fulcher, *Consultant*

MEDICAL BUREAU

Charles P. Ryland, *Chairman*
Samuel Dove, *Vice Chairman*

Louis Goldstein
Caroline Jackson
Charles V. Pate
Norman Paul
Raymond Scalettar
Lawrence D. Summerfield
Lawrence J. Thomas
Charles E. Townsend
Maurice van Kinsbergen

MEMBERSHIP

O. Hugh Fulcher, *Chairman*

Harry N. Carlton
Harry S. Douglas
William W. Funderburk
Kenneth L. McCoy
Joseph P. Swift
Azad J. Vosger
Harold T. Yates

RUFFIN AND OTHER BEQUEST FUNDS

James W. Watts, *Chairman*

Victor R. Alfaro
W. LeRoy Dunn
Milton M. Greenberg
Duane C. Richtmeyer

SPECIALTY CLASSIFICATIONS

Wallace M. Yater, *Chairman*
(Internal Medicine)

Allergy:
Ellis April
Anesthesiology:
John J. Leahy
Dermatology and Syphilology:
Wendell M. Willett
General Practice:
Samuel Diener
Internal Medicine:
Joseph J. Wallace
Obstetrics and Gynecology:
John J. Kuhn
Ophthalmology:
William J. G. Davis
Orthopedics:
George W. Hyatt
Otolaryngology:
Morris E. Krucoff
Neurology and Neurological Surgery:
Hugo V. Rizzoli
Pathology and Laboratory Medicine:
Paul B. Garcia
Pediatrics:
Allan B. Coleman
Physical Medicine:
Charles S. Wise
Plastic Surgery:
Arthur Dick
Proctology:
Robert S. Smith
Psychiatry:
Isadore Rodis
Pulmonary:
Milton Gusack
Radiology:
David H. Rosenfeld
Surgery:
C. Edwin McNamara
Thoracic Surgery:
J. Winthrop Peabody, Jr.
Urology:
Horatio N. Dorman

PHYSICIAN PLACEMENT

Leo J. Schildhaus, *Chairman*

Francis D. Chucker
John D. Griswold
O. H. Jorgenson

Council on Communications and Public Service

COMMITTEES

EMERGENCY MEDICAL SERVICE

John W. Latimer, *Chairman*
William R. Strong, *Vice Chairman*

Robert A. Fischer
Kermit H. Hanson
Arthur P. Hustead
Arch S. Russell, Jr.
George S. Vouvalis
Harry Zehner, Jr.
Samuel Zola

LIAISON WITH THE CLERGY

Robert J. Wetmore, *Chairman*

Maxwell Boverman
Jean O. Feys
Forest K. Harris II
James Hawfield
Nicholas S. Ionedes
Elizabeth S. Kahler
Lawrence B. McCaleb
Bernard Notes
William Raffel
Charles W. Thompson
Arthur A. Morris, Jr., *Consultant*

Representing Clergy by Invitation of Society

Rabbi Norman Gerstenfeld, Washington Hebrew Congregation
Rt. Reverend E. Robert Arthur, The Tribunal, Archdiocese of Washington
Canon Richard Williams, Episcopal Church House
Dr. Berkley C. Hathorne, Director, Washington Pastoral Counseling Service

LIAISON WITH UNITED PLANNING ORGANIZATION

Allan B. Coleman, *Chairman*

Victor L. Assevero
Hugh G. Clark
Charles R. Hayman
William A. Howard
Jack Kleh
Robert H. Parrott
Edwin P. Parker III
Roland B. Scott
Blanche Bourne, *ex officio*

MEDICAL ASPECTS OF SPORTS AND PHYSICAL FITNESS

John P. Adams, *Chairman*
Stanford Lavine, *Vice Chairman*

Milton C. Cobey
S. Joseph Cosimano, Jr.
Victor H. Esch
Judson G. Randolph
C. Francis Scalessa

Consultants

Roger Baker
J. Robert Gladden
George A. Resta
Hugo V. Rizzoli
William Stark
Bernard J. Walsh
Daniel F. Lynch, D.D.S.

PUBLIC INFORMATION AND EDUCATION

Warren D. Brill, *Chairman*
John M. Keshishian, *Vice Chairman*

Samuel Burtoff
Aloysius J. Connolly
Lee W. Davis
Orville W. Donnelly
Nelson G. Goodman
Harold M. Hagen
Jean L. Harris
James P. Hartley
Peter N. Horvath
James A. Kehoe
Lewis H. Kurtz
Allan E. Lee
James F. O'Rourke
Stacy L. Rollins, Jr.
Mitchell W. Spellman
Myer H. Stolar
Warren J. Strudwick
Joseph H. Watson
John R. Weimer

TRAFFIC

Herbert S. Gates, *Chairman*

Lester S. Blumenthal
Milton C. Cobey
Sydney Green
William Kurstin
Edward I. Kushner
Thayer M. MacKenzie
Willis B. Morse
Lester Neuman
R. Massie Page
Stephen S. Pappas

LIAISON WITH D. C. DEPARTMENT OF MOTOR VEHICLES

Jonathan M. Williams, *Chairman*

Joseph Dessoff
Earl H. Mitchell, Jr.
Josephine E. Renshaw
Thomas S. Sappington
Harry Zehner, Sr.

Council on Ethics and Professional Relations

COMMITTEES

ARMED FORCES AND VETERANS AFFAIRS

James E. Fitzgerald, *Chairman*
Robert C. Hecker, *Vice Chairman*

Thomas L. Auth
Richard L. Fields
John L. Fox
Arthur J. Levens
William Raffel
William T. Spence

GRIEVANCE

Irving Burka, *Chairman* (1966)
Jonathan M. Williams, *Vice Chairman* (1966)

John F. J. Clark (1966)
A. Magruder MacDonald (1966)
Seymour Alpert (1967)
Brooks G. Brown (1967)
Ernest Gould (1967)
John A. Reisinger (1967)
James E. Boland (1968)
Bernard Katzen (1968)
Thomas C. Lee (1968)
Jed W. Pearson, Jr. (1968)

LIAISON WITH ALLIED PROFESSIONS

William H. Seward, Jr., *Chairman*

Robert H. Barter
R. Claire Cobb
David H. Dabney
Angelo D'Agostino
John S. Dillon
Arthur Egelman
Marvin Fuchs
Everett J. Gordon
Albert E. Marland, Jr.
Lawrence B. McCaleb
Herbert A. Moskovitz
George D. Selby
Robert J. Sherman
Morris Silverman

LIAISON WITH FEDERAL AGENCIES

Allen S. Cross, *Chairman*

Otis R. Farley
Julius Hoffman
Allan M. McKelvie
Lawrence E. Putman
John E. Smith
Robert S. Wilkinson, Jr.

MEDICAL ETHICS AND PROFESSIONAL CONDUCT

John B. Marbury, *Chairman* (1966)

J. Keith Cromer (1967)
Samuel M. Dodek (1967)
Leonard T. Peterson (1967)
Lewis H. Biben (1968)
Paul Jaquet (1968)
Thomas F. McMahon (1968)

MEDICOLEGAL PROBLEMS

Alfred A. J. Den, *Chairman*
Philip Burka, *Vice Chairman*

Harvey Ammerman
Louis B. Balla
Samuel M. Becker
Ray N. Brown
Robert Day
Samuel Diener
Tibor E. Frekko
Murdock Head
Paula R. Kaiser
Eugene G. Lipow
Albert E. Marland, Sr.
Frank N. Miller, Jr.
Reuben E. Stone
John W. Walsh

Joseph F. Sadusk, Jr., *Consultant*

Council on Professional Education and Hospital Relations

COMMITTEES

LIAISON WITH MEDICAL SCHOOLS AND HOSPITALS

Maurice Protas, *Chairman*
E. Clarence Rice, *Vice Chairman*

Brian Blades
Jerome H. Epstein
William F. Feller
John J. Hughes
Robert Jason
Thomas F. Keliher
William T. Lady
John A. Long
Samuel D. Loube
Benjamin Manchester
James R. Nugent
John Parks
Thomas M. Peery
Elbert T. Phelps
Jack J. Rheingold
John C. Rose

POSTGRADUATE EDUCATION

Oscar B. Hunter, Jr., *Chairman*
James A. Curtin, *Vice Chairman*

Herbert Abramson
Donald F. Bogdan
W. Montague Cobb
Thomas E. Curtin
Gilbert M. Eisner
Leslie H. French
Bela Gondos
William L. Howell
Helen Ossofski Iliff
Roland B. Scott
Alfred J. Suraci
Howard E. Ticktin

MEDICAL JOURNAL EXCHANGE

Christopher T. Bever, *Chairman*

S. George Anagnos
Ervin A. Gombos
John F. Maher
David M. Seitzman
Stanley J. Talpers
Emerson A. Williams

Council on Community Health Problems

COMMITTEES

ALCOHOLISM

Earl H. Mitchell, Jr., *Chairman*
Anthony Zappala, *Vice Chairman*

Harry S. Bernton
Sanford L. Billet
Robert J. Brown
Alfred R. Greenfield
Mauris M. Platkin
Melvin D. Small

CANCER STUDY

John F. Potter, *Chairman*

William L. Amoroso, Jr.
J. Robert Andrews
Franklin T. Brayer
Charles M. Cabaniss
Jerome W. Canter
Peter D. Comanduras
William R. Hyde
John C. Kenealy
Calvin T. Klopp
Warren J. Nelson
Lois I. Platt
Cyril A. Schulman
William M. Trible

CHILD WELFARE

Robert H. Parrott, *Chairman*
Hugh G. Clark, *Vice Chairman*

William P. Argy
Morris Chase
Elizabeth E. Chickering
Allan B. Coleman
Hilary E. C. Millar
Margaret M. Nicholson
Roland B. Scott
Harold T. Yates

COMMUNICABLE DISEASES

John R. Pate, *Chairman*
John A. Kenney, Jr., *Vice Chairman*

William S. Anderson
Reginald G. James
Richard L. Levin
Babgen Mangasarian
Thomas E. Reichelderfer

ENVIRONMENTAL HEALTH

Harold H. Hobart, *Chairman*

Hugh O. House
Eloise W. Kailin
Hildrus A. Poindexter
Linwood L. Rayford, Jr.
Naomi M. Kanof
Mr. William H. Carey, *Consultant*
Mr. Schepers Gerrit, *Consultant*

MATERNAL WELFARE

James G. Sites, *Chairman*

Ridgley C. Bennett
Ross J. Clark
William R. Claytor
Edmund F. Daley
Harry S. Douglas
Julius R. Epstein
Eugene F. Finegan
James M. Frawley
Aaron H. Gerber
Morton S. Kaufman
Jean E. Paquin
Josephine E. Renshaw
William B. Russell

MENTAL HEALTH

Leon Yochelson, *Chairman*

Alice Brigham
John R. Cavanagh
Dale C. Cameron
Arcangelo R. T. D'Amore
Robert H. Groh
Christine W. Kehne
Morris Kleinerman
Edward I. Kushner
Thayer M. Mackenzie
Felix von Mendelssohn
Stanley L. Olinick
John D. Schultz
Richard A. Steinbach
Norman Taub
Donald Walters
Zigmond M. Lebensohn, *Consultant*

REHABILITATION AND CHRONIC ILLNESS

Clifton R. Brooks, *Chairman*
Jeanne C. Bateman, *Vice Chairman*

Harry N. Carlton
Richard C. Fowler
Margaret M. Kenrick
Robert P. Kling
Moe Weiss
Francis L. Wenger
Charles S. Wise

SMOKING AND HEALTH

George W. Ware, *Chairman*

Milton Gusack
Harry A. Horstman, Jr.
Sol Katz
Calvin T. Klopp
Roy G. Klepser
John J. Lynch
Mr. Birch Bayh, *Consultant*

Council on Medical Care and Medical Economics

COMMITTEES

BLOOD BANKS

Kenneth L. McCoy, *Chairman*

Edward Adelson
William G. Battaile
Vincent Hernandez
Oscar B. Hunter, Jr.
Vernon E. Martens
Paul R. McCurdy
Charles E. Rath, Jr.
O. E. Van Deraue, *Consultant*

EXTENDED CARE AND HOME CARE

Jack Kleh, *Chairman*
E. Herbert Bauersfeld, *Vice Chairman*

Henry D. Bell
William Chin
Arthur Dick
Robert F. Dyer
James J. Foster
Robert B. Havell
Robert G. Kindred
Edward C. Mazique
Dorothy A. Starr
Nina B. Woodside

FEE REVIEW

Herbert M. Giffin, *Chairman*
James J. Feffer, *Vice Chairman*

Paul Chodoff
William H. Cooper
Albert F. Fleury
Luther W. Gray
Stafford W. Hawken
Roy G. Klepser
John T. Lord
W. Robert Perkins, Jr.
Walter J. Romejko
Robert Stolar
Mr. George McGovern, *Consultant*

HOSPITAL UTILIZATION

William S. Cole, *Chairman*
Lewis H. Biben, *Vice Chairman*

Philip L. Calcagno
William H. Devlin
George D. Gartland
Felix P. Heald
Charles W. Jones
R. Frank Jones
Bertle Nelson
Edwin P. Parker III
S. Hazen Shea
Joseph B. Sheffery
Eugene H. Short

INSURANCE

Thomas M. Arnett, *Chairman*

Louis B. Balla
John W. Barrett
Benjamin Golden
Nelson G. Goodman
Hayden Kirby-Smith
L. Edward Perraut
John H. Sager

LIAISON WITH FEDERAL AND DISTRICT HEALTH PROGRAMS

Darrell C. Crain. *Chairman*
William W. Funderburk, *Vice Chairman*

LIAISON WITH PUBLIC HEALTH DEPARTMENT

Marvin C. Korengold, *Chairman*

William G. Ballinger
Franklin T. Brayer
Paul B. Cornely
Edwin P. Parker III
Josephine E. Renshaw
Monroe J. Romansky
Stanley J. Talpers

OCCUPATIONAL HEALTH

J. Rogers Young, *Chairman*
Charles E. Bickham, Jr., *Vice Chairman*

I. Phillips Frohman
Maxwell Hurston
Maurice J. Kossow
R. Lomax Wells

REGIONAL MEDICAL PROGRAMS

Desmond S. O'Doherty, *Chairman*

Clayton B. Ethridge
Charles A. Hufnagel
John A. Kenney, Jr.
Eugene J. McDonald
Nicholas P. D. Smyth
William M. Trible
U. V. Wilcox II

RELATIVE VALUE STUDY

Frank S. Bacon, *Chairman*
Philip H. Philbin, *Vice Chairman*

Charles E. Bickham, Jr.
Alan R. Crain
Howard A. Donald
Herbert A. Goldberg
Clifton R. Gruver
Howard Katzman
Vernon E. Martens
William S. McCune

Officers of the Sections of the Medical Society

ALLERGY

Halla Brown, *Chairman*
Philip J. Torsney, *Secretary-Treasurer*

ANESTHESIOLOGY

Mary L. Barker, *Chairman*
Thomas E. MacNamara, *Vice Chairman*
Kamel J. Hassan, *Secretary*
Helene G. Werner, *Treasurer*

DERMATOLOGY AND SYPHILOLOGY

Jack L. Derzavis, *Chairman*
William G. Ballinger, *Secretary-Treasurer*

GENERAL PRACTICE

Lewis A. Klein, *Chairman*
Samuel Dove, *Vice Chairman*
Claudine M. Gay, *Secretary-Treasurer*

GENERAL SURGERY

William H. Ferguson, *Chairman*
James Boland, *Vice Chairman*
Frank J. Sanzaro, *Secretary*
Frederick Y. Donn, *Treasurer*

INTERNAL MEDICINE AND ALLIED SUBSPECIALTIES

Andrew G. Prandoni, *Chairman*
Jack Kleh, *Vice Chairman*
Lewis H. Biben, *Secretary*
James E. Fitzgerald, *Treasurer*

NEUROLOGY AND NEUROLOGICAL SURGERY

James W. Watts, *Chairman*
William T. Spence, *Vice Chairman*
Warren V. Huber, *Secretary-Treasurer*

OBSTETRICS AND GYNECOLOGY

Philip P. Steptoe, *Chairman*
S. Hazen Shea, *Vice Chairman*
James G. Sites, *Secretary-Treasurer*

OPHTHALMOLOGY

Dan G. Albert, *Chairman*
Edward L. Perraut, *Vice Chairman*
Melvin G. Alper, *Secretary-Treasurer*

OTOLARYNGOLOGY

William M. Trible, *Chairman*
Arnold S. Greenberg, *Vice Chairman*
Joseph A. Sabri, *Secretary*
Louis B. Balla, *Treasurer*

PATHOLOGY AND LABORATORY MEDICINE

Luis Lopez, *Chairman*
Robert E. McCullough, *Vice Chairman*
Ira D. Godwin, *Secretary-Treasurer*

PEDIATRICS

Allan B. Coleman, *Chairman*
Hugh G. Clark, *Secretary-Treasurer*

PHYSICAL MEDICINE AND REHABILITATION

Pat Balsamo, *Chairman*
Clara Fleischer (Baltimore), *Vice Chairman*
David A. Zohn, *Secretary-Treasurer*

PLASTIC SURGERY

John E. Alexander, *Chairman*
Nicholas M. Azzato, *Vice Chairman*
Alfred J. Suraci, *Secretary-Treasurer*

PSYCHIATRY

John D. Schultz, *President*
Paul Chodoff, *President-elect*
Richard A. Steinbach, *Secretary*
Milton Meltzer, *Treasurer*

RADIOLOGY

Eugene J. McDonald, *Chairman*
Martin A. Thomas, *Chairman-elect*
Gregory T. Henesy, *Secretary-Treasurer*

MAXWELL
AND
TENNYSON
INC.
PHARMACISTS

"*Where Pharmacy is a Profession*"
M+T
Washington, D. C.

1801 Eye Street **NAtional 8-0206**
1835 Eye Street **STerling 3-0360**
1726 Eye Street **298-6540**

Prescriptions called for and delivered without extra charge

Biologicals–Vaccines
Serums
Hypo-Allergenic Cosmetics

NATIONAL AND REGIONAL MEETINGS

March 28-31: Collegium Internationale Neuro-Psychopharmacologicum (Fifth International Congress). Sheraton Park Hotel, Washington. Address: C. I. N. P., Congress Secretariat, ℅ Miss Margaret K. Taylor, 3636 16th Street, N. W., Washington, D. C. 20010.

April 4–8: 39th Annual Spring Congress in Ophthalmology and Otolaryngology. Gill Memorial Eye, Ear and Throat Hospital, Roanoke, Va. Address: Superintendent, P. O. Box 1789, Roanoke, Va.

April 12–16: Federation of American Societies for Experimental Biology. Atlantic City, N. J. Address: Dr. Milton O. Lee, 9650 Wisconsin Avenue, Washington, D.C. 20014.

April 14–19: American Dermatological Association. Homestead Hotel, Hot Springs, Va. Address: Dr. Robert R. Kierland, *Executive Secretary*, Mayo Clinic, Rochester, Minn.

April 15–17: American Society of Internal Medicine. Biltmore Hotel, New York. Address: Mr. Albert O. Whitehall, *Executive Director*, 3410 Geary Blvd., San Francisco, Calif. 94118.

April 18–22: 47th Annual Session of American College of Physicians. New York Hilton and Americana Hotels, New York. Address: Dr. Edward C. Rosenow, Jr., *Executive Director*, 4200 Pine Street, Philadelphia, Pa. 19104.

April 25–27: American Academy of Pediatrics. Queen Elizabeth Hotel, Montreal. Address: Dr. E. H. Christopherson, *Executive Director*, 1801 Hinman Avenue, Evanston, Illinois 60204.

April 25–29: American College of Allergists. Palmer House, Chicago. Address: Dr. William B. Steen, *Secretary*, 116 North Tucson Blvd., Tucson, Ariz.

April 26–30: American Academy of Neurology. Bellevue-Stratford Hotel, Philadelphia. Address: Mr. Thomas D. Swedien, *Executive Secretary*, 7100 France Avenue South, Minneapolis, Minn. 55410.

April 27–28: Medical and Chirurgical Faculty of the State of Maryland. The Alcazar, Baltimore. Address: Mr. John Sargeant, *Executive Secretary*, 1211 Cathedral Street, Baltimore, Md. 21201.

April 27–30: American Association of Plastic Surgeons. Sheraton-Cleveland Hotel, Cleveland. Address: Dr. Robert M. McCormack, 260 Crittenden Blvd., Rochester, N. Y. 14620.

May 12–15: Virginia Academy of General Practice. Hotel Roanoke, Roanoke, Va. Address: Mrs. Louise B. Greiner, *Executive Secretary*, 4205 Dover Road, Richmond, Va. 23221.

May 21-22: AMPAC National Workshop. Sheraton-Park Hotel, Washington.

June 25: American Association for the Study of Headache. Conrad Hilton Hotel, Chicago. Address: Dr. Seymour Diamond, *Secretary*, 5214 North Western Avenue, Chicago, Ill. 60625.

METAHYDRIN (trichlormethiazide) is prescribed by physicians because it not only approximates the diuretic efficacy of parenteral meralluride injection . . . but, *it is the least expensive of all "brand-name" thiazides*. Therefore, when you prescribe METAHYDRIN (trichlormethiazide) your patients receive the thiazide diuretic that removes a little more salt and water than earlier thiazides, with relatively less loss of potassium . . . and, it's therapy they can more easily afford . . . *only pennies a day.*

SAVES
LIVES
SAVES
MONEY
WASTES
WATER

METAHYDRIN®
(trichlormethiazide)
oral diuretic

Dosage: One 2 or 4 mg. tablet once or twice daily.

Precautions: As with all effective diuretics, vigorous therapy may produce electrolyte depletion. Patients with severely reduced renal function should be observed carefully since thiazides may be contraindicated. Care should be taken with patients predisposed to diabetes or gout. Patients with a tendency to potassium deficiency, as in hepatic cirrhosis or diarrheal syndromes, or those under therapy with digitalis, ACTH, or certain adrenal steroids, also should be watched carefully.

Side Effects: Nausea, flushing, constipation, skin rash, muscle cramps and gastric discomfort have occasionally been noted; rarely thrombocytopenia and bone marrow depression, photosensitivity, cholestatic jaundice, pancreatitis, perimacular edema, gout and diabetes have been caused by the administration of thiazides.

Contraindications: Complete renal shutdown; rising azotemia or development of hyperkalemia or acidosis in severe renal disease; demonstrated hypersensitivity.

How Supplied: Bottles of 100 and 1000 tablets.

LAKESIDE LABORATORIES, INC., Milwaukee, Wisconsin 53201

LAKESIDE

PRODUCTS
FOR PATIENTS
YOU SEE
EVERY DAY

BOOK REVIEWS

Nursing Education in Community Junior Colleges. A Four-State, 5-year Experience in the Development of Associate Degree Programs. Bernice E. Anderson, Ed. D. Pp. 319. Philadelphia: Lippincott, 1966.

Essentially, this effort recounts an attempt to formulate a 2-year training program for "semiprofessional nurses" or "nursing technicians." One-, 3-, 4- and 5-year study plans already having been instituted, such a program appeared to be one requiring consideration, particularly in view of the pressing need for increased numbers of nursing personnel on various academic levels. The project was executed in selected states, namely, California, New York, Florida and Texas, over a 5-year period with the financial support of the W. K. Kellogg Foundation.

Specially trained administrators and faculties who were engaged in the program conducted it in various 2-year community colleges and local hospitals with requisite paramedical facilities. Most applicants were recruited from among students unable to qualify for or unwilling to participate in a Registered Nurse program. Students successfully completing the course received an Associate Degree in Nursing.

The attrition rate was inordinately high. The reasons why students failed to complete the course were diverse. In the author's opinion, the attrition rate was lowest in groups having the most able administrators. However, the author concludes that not enough time has elapsed to enable a definitive assessment of the value of this project.

Those concerned with staffing hospitals and training hospital personnel will find this book provocative.

A. Grace Pierce, M.D.

Principles of Chest Roentgenology. A Programed Text. Benjamin Felson, M.D., Aaron S. Weinstein, M.D., and Harold B. Spitz, M.D. Price, $6.00. Pp. 221, illustrated. Philadelphia: Saunders, 1965.

This new text employs the increasingly popular method of programed instruction, advancing by easy stages from the simple to the more complex, guided by student response. In a comparison of this same material taught by illustrated lecture, among medical students, it was found that while the top students performed well with either method, the less proficient ones performed significantly better with the programed text. In addition, both groups showed slightly better long-term retention with the programed method.

The purpose of the book is to teach some of the fundamentals of chest roentgenology to nonradiologists. Much of the material is borrowed from an expanded conventional text by the senior author. An introductory chapter describes the positions, projections and techniques of chest examination, explaining and demonstrating the indications for each of them. This is followed by a thorough discussion of lobar and segmental anatomy of the lung.

The 4 basic roentgen densities of gas, water, fat and metal are described in a chapter on the silhouette sign, a valuable tool in localizing lung lesions. Other chapters analyze the signs of lobar and segmental collapse, pleural effusion, extrapleural diseases, and the air bronchogram sign. A special chapter discusses 15 causes of rib notching.

The final chapter is in the form of a self-test quiz on 10 cases chosen to demonstrate most of the points in the preceding sections.

The authors' informal and humorous style makes study and review of this book a pleasant and relaxing experience. It provides to student, house staff and clinician a sound background in chest roentgen interpretation with a minimum (2 to 4 hours) expenditure of time.

Harold M. Hagen, M.D.

Handbook of Physical Medicine and Rehabilitation. Published under the auspices of the American Rehabilitation Foundation. Edited by Frank H. Krusen, M.D.; Associate Editors: Frederic J. Kottke, M.D., and Paul M. Ellwood, Jr., M.D. Price, $16.50. Pp. 725, illustrated. Philadelphia: Saunders, 1965.

This text is divided into 3 sections. The first is concerned with aspects of patient evaluation and includes an evaluation of the upper and the lower extremities, an evaluation of speech and language problems, and psychologic, social and vocational assessment and management. The second section deals with techniques of management and includes the use of physical methods of treatment such as heat, electricity and exercise, the functional training of a patient in the use of crutches, braces, wheel chairs, etc., and occupational therapy techniques. The final section of the book discusses the management of the more common neuromuscular, musculoskeletal and arthritic disorders.

The book is edited by Dr. Krusen and his colleagues, with individual chapters contributed by different authors. As frequently happens in a book with multiple authorship, there is an uneven quality to the chapters. Some are so superficial that one wonders why they have been included, whereas others are very technical and involved. On the whole, however, the chapters are readable and informative. The print is large and easily read, and for the most part the bibliographies are adequate. Much of the latest thinking is presented but some material is still included on techniques which are no longer in common clinical use; for example, the use of douches and ablutions, in the chapter on hydrotherapy, and an extensive discussion of the use of ultraviolet therapy.

The book is a worthwhile addition to the library of

(*Continued on page 36*)

Metatensin lowers blood pressure and keeps it low—effectively and economically. It combines reserpine with trichlormethiazide which affords more potent saluresis with less loss of potassium than from earlier thiazides. Reserpine contributes antihypertensive effect by relieving anxiety and tension. Metatensin is well-tolerated over long periods; with its effectiveness and economy it assures antihypertensive therapy you and your patients can stay with.

BRING IT DOWN
AND
KEEP IT DOWN

190/102

METATENSIN®

Each scored tablet contains:
METAHYDRIN® (trichlormethiazide)
2 mg. or 4 mg. and
Reserpine 0.1 mg.

Usual adult dose: One tablet twice daily. **Precautions and side effects:** Patients with hepatic cirrhosis or diarrheal syndromes, or under therapy with digitalis, ACTH, or potassium-losing steroids, should be observed for signs of hypokalemia. With thiazides, electrolyte depletion, diabetes, gout, granulopenia, nausea, pancreatitis, cholestatic jaundice, flushing, mild muscle cramps, constipation, photosensitivity, acute myopia, perimacular edema, paresthesias, neonatal bone marrow depression in infants of mothers who received thiazides during pregnancy, skin rash or purpura with or without thrombocytopenia, may occur. With reserpine, untoward effects may include depression, peptic ulcer and bronchial asthma. Withdraw medication at least 7 days prior to electroshock therapy, 2 weeks prior to elective surgery.

Contraindications: Complete renal shutdown, rising azotemia or development of hyperkalemia or acidosis in severe renal disease.

Supplied: Metatensin tablets, 2 mg., 4 mg.—bottles of 100 and 1000.

LAKESIDE LABORATORIES, INC., Milwaukee, Wisconsin 53201

LAKESIDE

PRODUCTS
FOR PATIENTS
YOU SEE
EVERY DAY

Book Reviews

(*Continued from page 34*)

physicians in the field of physical medicine and rehabilitation. Although some of the material included is extremely technical and other material is not of direct interest to physicians outside the specialty, it is a desirable reference book for those physicians in related specialties who would like a greater understanding of physical medicine techniques.

David A. Zohn, M.D.

Bone Tumors, 3rd ed. Louis Lichtenstein, M.D. Price, $16.75. Pp. 411, with 251 illustrations. St. Louis: Mosby, 1965.

The value of "Bone Tumors" by Dr. Louis Lichtenstein has been widely acclaimed in its previous 2 editions by clinician and pathologist alike, and certainly this edition should be as well received. It does not contain a great deal of new information, there being only 1 new chapter, but some of the contents has been relocated: benign and malignant chondromal tumors, as well as some other tumors, have been regrouped, e.g., parosteal sarcomas are now in the chapter on osteogenic sarcomas. This reviewer questions the classification of fibrous dysplasia under non-neoplastic lesions of bone, while nonossifying fibroma is included in the section on nonosteogenic lesions of bone.

If treatment of bone lesions, particularly malignant ones, is to be included in a treatise today, then perhaps some additional remarks should be made in reference to current concepts in roentgen- and chemotherapy.

The author's emphasis on an adequate biopsy to assure accurate tissue diagnosis supports a belief shared by most orthopedic surgeons. Generally this edition is equal to its predecessors in overall excellence of presentation, and this work will continue to be a standard reference in the field of bone and related tumors.

John P. Adams, M.D.

Genetics and the Epidemiology of Chronic Diseases. A Symposium, June 17–19, 1963, Ann Arbor, Michigan, sponsored by U. S. Public Health Service, University of Michigan Medical School, University of Michigan School of Public Health. Edited by James V. Neel, Margery W. Shaw, and William J. Schull. Price (paper), $1.50. Pp. 395, illustrated. Washington, D. C.: U. S. Dept. of Health, Education, and Welfare, Public Health Service, Division of Chronic Diseases, 1965.

This book is a collection of papers which were presented at a symposium concerned with genetics and the epidemiology of chronic diseases.

In the opening comments by Thomas Francis, Jr., M.D., the statement is made that genetic correlations with certain disorders are difficult to establish. This statement keynotes the entire meeting. The first section devoted to basic principles of genetics is extremely technical and requires a strong background in genetics to understand.

Basic methods of studying twins are covered in a chapter by Bent Harvald and M. Hauge. The conclusions from studying 7,000 pair of twins born in the years 1870–1910 indicate that genetic factors play an unimportant role in the etiology of malignant growths, coronary occlusion, and peptic ulcer. Monozygotic twins illustrated a higher concordance rate than dizygotic twins for arterial hypertension, epilepsy, manic-depressive psychosis, tuberculosis, rheumatic fever, rheumatoid arthritis, bronchial asthma, and diabetes. Several authors indicated that there must develop better communication between the geneticists and the epidemiologist. Dr. Abraham M. Lilienfeld emphasized that the epidemiologist must utilize data from various disciplines, including genetics, clinical medicine and epidemiology, to determine if a pattern develops which would serve as a basis for deriving fairly valid inferences concerning the biology of disease in human populations.

The second section concerns specific diseases, e.g., diabetes mellitus, listed as "a geneticist's nightmare," coronary artery disease, and certain neurologic disorders. Once again, the lack of correlation is emphasized. The third and fourth sections of this volume review problems in the experimental design of such studies and the regional variations in morbidity and mortality. The relationship between mongolism and leukemia was reënforced and, furthermore, the occurrence of mongolism among the siblings of leukemic children was described.

The book closes with a chapter entitled Genetic Counseling by Dr. Franz J. Kallmann. This chapter is probably the most valuable for the practicing physician to whom the family turns for advice in such matters. Although it is a cautious chapter indicating the limitations of such counseling, it emphasizes the need for improved techniques and increased training for personnel in this specialty. Unless trained in this area, having knowledge of at least simple facts of human genetics, the physician ordinarily cannot function as a competent counsel in this important and emotionally tinged area.

James A. Curtin, M.D.

Neuro-ophthalmology, Volume II. Symposium of the University of Miami and the Bascom Palmer Eye Institute. Compiled and edited by J. Lawton Smith, M.D. Price, $21.75. Pp. 278, illustrated. St. Louis: Mosby, 1965.

This volume covers the proceedings of the second clinical Neuro-Ophthalmology Symposium sponsored by the Department of Ophthalmology of the University of Miami School of Medicine. It represents a departure from the first symposium which attempted to "run the gamut," embracing all of neuro-ophthalmology.

(*Continued on page 38*)

a rapid lift from the hell of depression

often relieves mental pain in 2-5 days

Doré Illustration
from
Dante's Inferno

NORPRAMIN®
(desipramine hydrochloride)

Norpramin is a rapid-acting specific drug for the treatment of depression. Depressive signs and symptoms—sometimes described as "mental pain"—typically begin to improve in 2-5 days. Patients are more hopeful, less empty and less weighed down by their troubles. Norpramin has only slight sedative qualities, nevertheless anxiety *secondary to depression* is frequently relieved as depression is lifted. If anxiety or tension persists it can be controlled by adding a tranquilizer or by reducing dosage. Norpramin is not a MAO inhibitor. Side effects are usually mild.

DOSAGE AND ADMINISTRATION

Optimal results are obtained at a dosage of about 150 mg./day—two 25 mg. tablets t.i.d. After achieving optimal results, a maintenance dose (50-100 mg./day) should be sought.

LAKESIDE LABORATORIES, INC. Milwaukee, Wisconsin 53201

IN BRIEF:

Indications: In depression of any kind—neurotic and psychotic depressive reactions; manic-depressive or involutional psychotic reactions.

Contraindications and Precautions: Glaucoma, urethral or ureteral spasm, recent myocardial infarction, severe coronary heart disease and epilepsy. Should not be given within two weeks of treatment with a monoamine oxidase inhibitor. Safety in human pregnancy has not been established.

Adverse Effects: Side effects, usually mild, may include: dry mouth, constipation, dizziness, palpitation, delayed urination, "bad taste," sensory illusion, tinnitus, agitation and stimulation, sweating, drowsiness, headache, orthostatic hypotension, flushing, nausea, cramps, weakness, blurred vision and mydriasis, rash, allergy, transient eosinophilia, granulopenia, altered liver function, ataxia and extrapyramidal signs.

Supplied: Norpramin (desipramine hydrochloride) tablets of 25 mg., in bottles of 50, 500 and 1000.

Book Reviews

(*Continued from page 36*)

On the contrary, "Each participant was asked to speak on the subject of his most active current interest."

Although clinical ophthalmology is stressed, the important relationship to research and the laboratory as well as to basic anatomy is obvious and emphasized where necessary.

Of the 100 patients who were presented at the meeting, the case histories and photographs which are included are generally quite excellent.

The one disappointment in this volume, compared to the first symposium, is the essential absence of comments of the papers offered by Dr. Smith.

The 12 chapters by an outstanding group of ophthalmologists cover a variety of topics of current interest. It is obvious that this is not a substitute for a textbook but is an important complement to a person's basic understanding of neuro-ophthalmology.

With the national interest centering currently upon strokes and vascular disease, it is encouraging to see 3 of the 12 sections devoted to these topics exclusively. "The Neuro-ophthalmology of Strokes" is eruditely expounded by Dr. Hollenhorst, emphasizing the key role of the Neuro-ophthalmologist in the evaluation of the stroke patient.

Dr. Hedges gives an excellent discussion of "Modern Concepts of Occlusive Vascular Disease in Ophthalmology." And Dr. David presents the "Neuro-ophthalmology of Occlusive Disease in the Vertebral Basilar Arterial System." The importance of the FTA-ABS test in detecting seronegative ocular syphilis and neurosyphilis is explained by Dr. Smith.

Drs. Taylor, Singer, Yobs, and Smith describe the production of "Experimental Seronegative Syphilis." Dr. Cogan very clearly discusses and classifies "Heredodegenerations of the Retina." A discussion of the present status of "Angiography of the Ocular Fundus" by Dr. Norton is complemented by Justice's and Sever's clear explanation of the "Technique of Fluorescein Fundus Photography."

Dr. Walsh lets us in on the visual field equipment and methods used in his office and presents interesting cases in "Selected Visual Field Studies." "Neuropathology involving the Lateral Geniculate Bodies, the Optic Radiation, and the Calcarine Cortex" is related to the clinical conditions by Dr. Lindenberg.

Hoyt and Loeffler in their discussion of "Neurology of the Orbicularis Oculi" reveal to us the increasing knowledge of the mechanics and clinical aspects of lid closure. An excellent review of the phakomatoses is presented by Dr. Gass.

The group of 12 selected topics in neuro-ophthalmology relate to many areas encountered in clinical practice and serve as a worthwhile contribution to keeping the practicing ophthalmologist up-to-date in a field of increasing importance.

Frank J. Weinstock, M.D.

Clinical Anticoagulant Therapy. Myron I. Vigran, M.D., M.S., F.A.C.P., with Collaborating Authors and a Foreword by Irving S. Wright. Price, $15.00. Pp. 315, with 63 illustrations, including 1 in color. Philadelphia: Lea, 1965.

The purpose of this book, as stated in the preface, is to provide a "clinical guide" for physicians interested in administering anticoagulants. It does not pretend to be a compendium of monographic proportions that would enter into the current controversy concerning the merits or demerits of anticoagulant treatment. It is a beautifully written, clearly presented guide for practitioners, of whatever specialty, who wish to administer anticoagulants to their patients. It fulfills a specific need, especially for doctors practicing in areas far removed from large medical centers.

Dr. Vigran, in collaboration with 8 other authors, anticipates, from clinical experience, the countless questions and provides the answers to the "why," "when," "what," and "how" to administer this form of treatment. The indications, contraindications, and the results are clearly and succinctly discussed in 13 chapters of this book. The first chapter arduously begins with the historic use of leeches and slowly traces the development of presently available oral and parenteral anticoagulants. It is the only chapter that appears redundant and is not in keeping with the crisp, clear style of the remainder of the book.

The homeostatic mechanisms for maintaining blood liquidity suffer for the lack of adequate discussion of the current concepts of blood coagulation. A scientific presentation of the role that various known clotting factors play in hemostasis would greatly enhance the clinical and practical features that distinguish this book.

The chemistry and pharmacology of anticoagulants and their congeners are thoroughly presented by Leon Freeman. Their application in coronary artery disease, pulmonary embolism, cerebral and peripheral vascular diseases, as well as the use of anticoagulants in various specialties are treated in great detail.

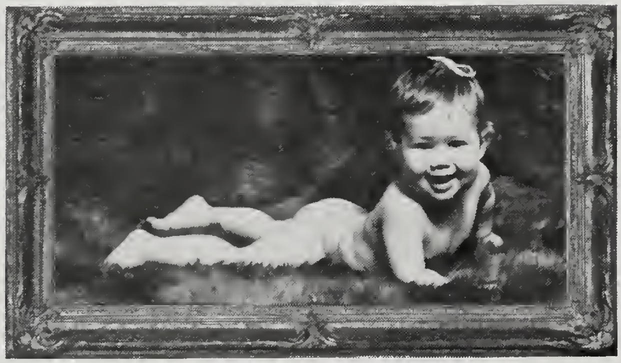
The contraindications and the complications of such therapy receive 23 pages of international, soul-searching evaluation. The prevention and recognition of hemorrhage and other complications culled from the world's literature provide incontrovertible reassurance that the virtues of anticoagulant therapy outweigh its potential hazards.

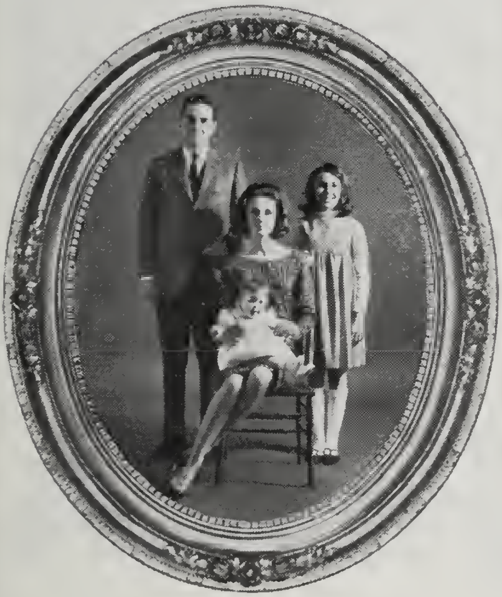
The bibliography is extensive. It alone is worth the price of the book. Despite the above criticism, the practitioner, whether surgeon or physician interested in the effective management of anticoagulant therapy, will find this book to be helpful. It is truly a "Guide for the Perplexed."

Benjamin Manchester, M.D.

Turn a bundle of colic

into a bundle of joy





COLIC, often in part a reflection of family tension, adds sleepless nights to patients' and parents' distraught days. Pediatric Piptal with Phenobarbital slows down spasm, diminishes pain and crying, improves feeding patterns . . . permits sleep and rest . . . for patient and family.

Pleasant tasting Pediatric Piptal with Phenobarbital is miscible in milk, formulas and fruit juices, and may also be administered by dropper directly on the infant's tongue. Dosage is 0.5 cc. 15 minutes before feeding; in severe cases, 1.0 cc. four times daily. High doses may occasionally cause constipation with tenesmus and, rarely, flushing without fever. Contraindicated in bowel obstruction or sensitivity to phenobarbital or anticholinergics. Available in 30 cc. dropper bottles, droppers calibrated to deliver 0.5 cc.

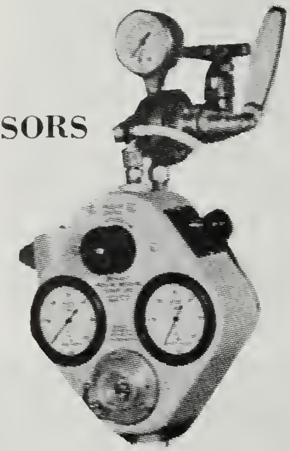
PEDIATRIC PIPTAL®
WITH PHENOBARBITAL

each cc. contains: 6 mg. phenobarbital (warning: may be habit forming); 4 mg. Piptal® (pipenzolate bromide), and 20% alcohol in a pleasant-tasting solution.

LAKESIDE LABORATORIES, INC.
Milwaukee, Wisconsin 53201

OXYGEN
24-HOUR SERVICE
363–9595

I P P B
COMPRESSORS
OXYGEN
SALES
RENTALS



Inhalation Therapist on Duty
EM 3–9595

ACCREDITED SURGICAL CO.
Medical and Surgical Supplies
3226 Wisconsin Ave., N.W.

Diagnostic Problems
. . . With Your Securities?

You need a complete securities "Check-up." Let our Research Department make a thorough analysis of your holdings. Perhaps we can discover the cause of your complaint and prescribe a few beneficial changes that will remedy the problem. No obligation.

To obtain your copy of our convenient Inventory Form for listing securities

Just Phone or Stop By

FERRIS & CO.

Members New York Stock Exchange
611 Fifteenth St. N.W.
STerling 3-8222

Serving the Doctors of Metropolitan Washington
Since 1942

PROFESSIONAL BUSINESS MANAGEMENT, INC.

JOHN C. POST, *President*

A PERSONAL SERVICE DESIGNED TO ASSIST THE DOCTOR WITH THE BUSINESS SIDE OF MEDICAL PRACTICE.

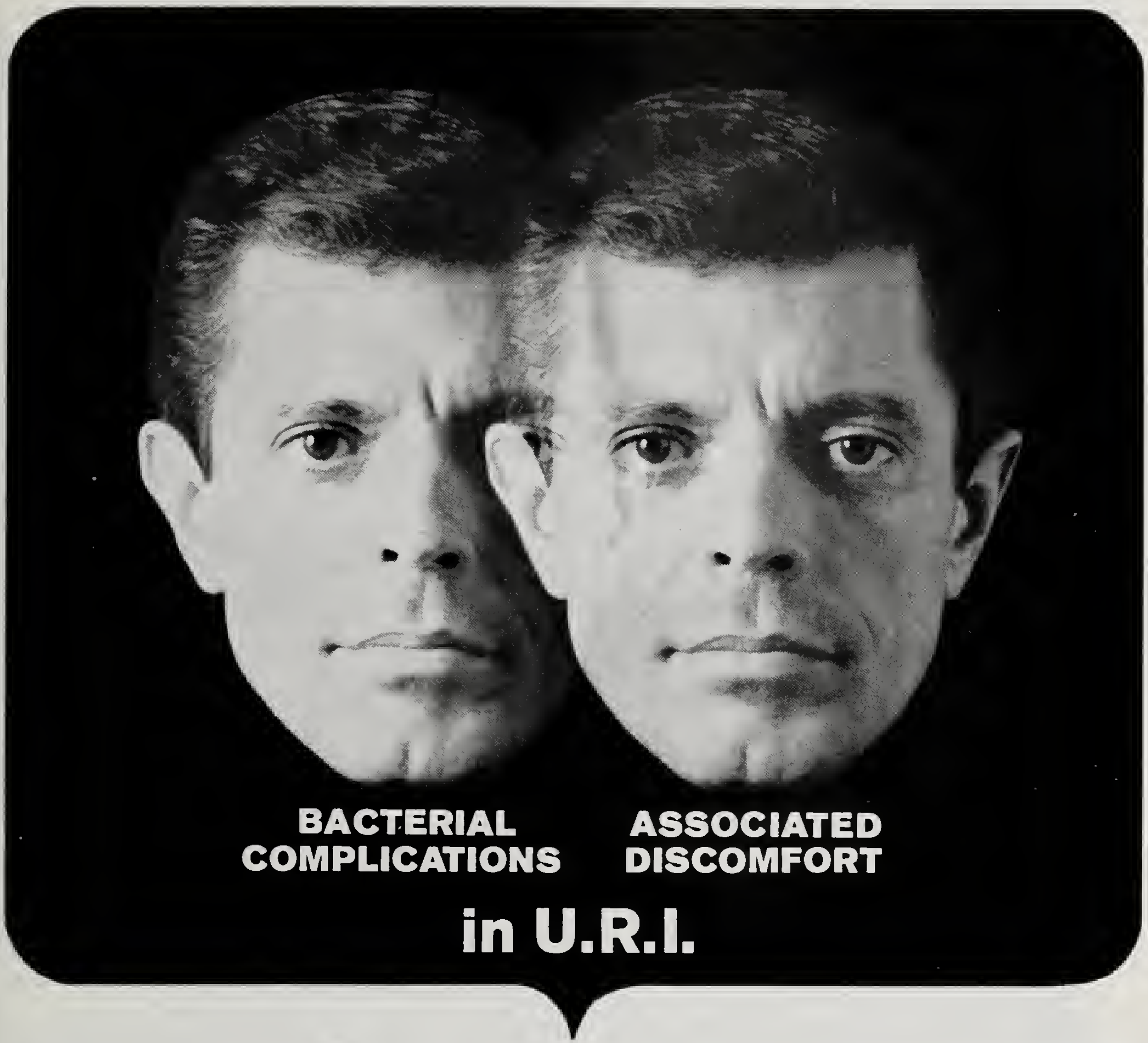
• *Medical Management Specialists* •

1012 20th Street, N.W Washington, D.C. 20036 Tel. FEderal 8-3200

BEUCHLER'S
915-19th Street, N.W. Republic 7-6006

In the Chevy Chase Area
FOR THE BEST IN DRUGS AND SERVICE
IT'S
HIGGER'S
ESTABLISHED 1930

Complete Biological Stocks
HIGGER'S DRUGS, INC.
5015-17-19 Connecticut Avenue
Phone: Woodley 6-1815
Note: Special physicians' phone to Prescription Department: Woodley 6-5555



BRING THE TREATMENT TOGETHER IN A SINGLE PRESCRIPTION

ACHROCIDIN®

Tetracycline HCl-Antihistamine-Analgesic Compound

Each tablet contains:

ACHROMYCIN® Tetracycline HCl	125 mg	Caffeine	30 mg
Acetophenetidin (Phenacetin)	120 mg	Salicylamide	150 mg
		Chlorothen Citrate	25 mg

Effective in controlling complicating tetracycline-sensitive bacterial infection and providing symptomatic relief in allergic diseases of the upper respiratory tract. Possible side effects include drowsiness, slight gastric distress, anorexia, overgrowth of nonsusceptible organisms, tooth discoloration (if given during tooth formation), photodynamic reaction to sunlight and increased intracranial pressure (in young infants). Average adult dosage: 2 tablets four times daily, given at least one hour before, or two hours after meals. Patient should avoid direct exposure to artificial or natural sunlight; and should not drive a car or operate machinery while on drug. Reduce dosage in impaired renal function. Stop drug immediately at the first sign of adverse reaction.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N. Y. Lederle

6085-2911

A Symbol
to Support...

AMA-ERF

American Medical
Association — Education
and Research Foundation
535 N. Dearborn St., Chicago 10, Ill.

Surgical Supplies and Equipment

Complete Fitting Service for
Ladies and Men

NELSON KLOMAN SURGICAL SUPPLY CO.
1018 - 18th Street, N.W.
Washington 36, D. C.

Telephone: FEderal 8-5245

KALORAMA
CONVALESCENT
HOME, INC.

Licensed by the D. C. Department
of Licenses and Inspections

INSTITUTIONAL CARE
for the medical management of
the acute stages of alcoholism.

2001 KALORAMA ROAD
at 20th Street, N.W. Adams 2-0063

EACH PATIENT
is precisely measured for a Jobst support.

Jobst venous pressure gradient supports are custom-made from precise measurements of your patient's extremity. Each support is individually engineered to exert the correct counter pressure according to your diagnosis and each support is guaranteed to fit, no strangulation, no puddling, no tourniqueting. Our service center is staffed with experts who will measure and fit your patient on your prescription only.

There is no charge for this service. Here is an advanced, clinically proved program of treatment for vascular deficiencies. For prescription blanks and medical reprints, have your secretary phone or drop us a card. Jobst Service Center 818 Eighteenth St. N.W. Phone: 298-5530 Washington, D. C. 20006

©1966 Jobst

makes sleep irresistible

nidar®

EACH TABLET CONTAINS:

Pentobarbital Sodium	25 mg.
Secobarbital Sodium	25 mg.
Butabarbital Sodium	7.5 mg.
Phenobarbital	7.5 mg.

(WARNING: MAY BE HABIT FORMING)

ARMOUR PHARMACEUTICAL COMPANY
Chicago, Illinois, U.S.A.

nidar®

Sleep comes easy...lingers...departs naturally

Gentle doses of 4 barbiturates assure uninterrupted sleep

2 barbiturates act fast...in 20 to 30 minutes

2 long-range barbiturates come into play to sustain sleep for up to 8 hours

Tiny amounts of individual barbiturates means Nidar is well tolerated

Patients enjoy a refreshing, clear-headed wake-up

makes sleep irresistible

IN BRIEF:

EACH TABLET CONTAINS:

Pentobarbital Sodium	25 mg.
Secobarbital Sodium	25 mg.
Butabarbital Sodium	7.5 mg.
Phenobarbital	7.5 mg.

(WARNING: MAY BE HABIT FORMING)

Dosage: One or two tablets, one-half hour before bedtime.

Indications: For night-time sedation and refreshing sleep up to eight hours.

Contraindications: Patients sensitive to barbiturates. Use with caution in the presence of moderate to severe hepatic disease.

Supplied: Bottles of 100 tablets.

CAUTION: Federal law prohibits dispensing without a prescription.

ARMOUR PHARMACEUTICAL COMPANY
Chicago, Illinois, U.S.A.

Professional* & Personal Insurance Placement for the Doctor

●

McDermott Insurance, Incorporated

815 Connecticut Avenue, N.W.
Washington, D.C. 20006
Telephone 298–8750
(Located in the middle of the Medical Area on Farragut Square)

*As recommended by the Local Medical Societies

Planned and operated by Physicians—OPEN STAFF policy

Magnolia Gardens Nursing Home

Serving the Greater Washington Area

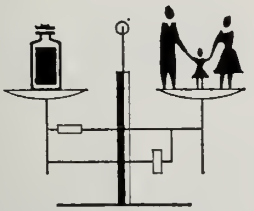
Specializing in long-term or acutely ill cases, also care during working hours, limited stays for vacation periods. Administered by Registered Nurse, 24-hour professional nursing service. Dietician-controlled meals, physio- and occupational therapy programs.

Your patient is assured medical supervision at all times. In an emergency doctors are on call to carry out your instructions until you personally can attend your patient.

Constructed 1964; completely fireproof; safety features. Gracious living, with attractive lounges, sundecks, chapel, cheery diningroom, homelike bedrooms. Outside gardens and patios for your patients' pleasure.

Illustrated brochure sent on request

9104 Good Luck Road—Lanham, Maryland
Capital Beltway—Exit #30 East-Route 450 PHONE 552–2000
Take next immediate left at Princess Garden Parkway 1 mile to Nursing Home



THE BLOOD SERVICE PLAN *of the*

Metropolitan Washington Blood Banks, Inc.
A Nonprofit Organization

Member of American Association of Blood Banks

For information telephone 638-2205

Suite 500, 915 19th Street, N.W.

T. A. Loosbrock, Executive Director

CLASSIFIED ADVERTISEMENTS

Advertisements under the following headings are charged at the rate of $5.00 for one insertion of 50 words or less; $4.00 each for three insertions; and $3.00 each for six insertions or more. All advertisements are payable in advance; the Editorial Board reserves the right to edit copy. Closing date for new copy, 15th of month preceding date of issue.

Classified advertisements of a professional nature are free to members.

SITUATIONS WANTED

RADIOLOGIST, Board-certified, university trained, assistant professor; age 32, married; licensed in D.C. and Maryland, desires private practice opportunity or equal group association. Address Box 69, 2007 Eye Street, N.W., Washington, D. C. 20006.

PHYSICIANS WANTED

PHYSICIAN for responsible position in clinical research and development activities of large Midwestern chemical company. Ability to communicate effectively with other medical and technical people essential. Excellent career potential in internal medicine or dermatology. An equal opportunity employer. Send resume to Box 81, 2007 Eye Street, N.W., Washington, D. C. 20006.

GP OR INTERNIST to assist with busy practice beginning July 1 and share fully equipped office on fee-for-service basis. No investment required. Address Box 42, 2007 Eye Street, N.W., Washington, D.C. 20006.

PRACTICE FOR SALE

INTERNAL MEDICINE: Internist in practice for over 30 years with subspecialty in gastrointestinal diseases. Equipment and active patient records. Address MRS. LEO T. BROWN, 1621 New Hampshire Avenue, N.W., Washington D. C. 20009 or telephone Dupont 7-7722.

REAL ESTATE

FOR RENT: Penthouses on upper Connecticut Avenue, N.W.: 2 bedrooms with 2 baths; 3 bedrooms with 3 baths. Also efficiencies and 2-bedroom apartments. Telephone MRS. BROOKS, 362-3319.

FOR SALE: Home with office on large corner lot. Private entrance to office. Excellent location in suburban Northern Virginia's most rapidly growing community. Adjacent to golf course and swimming pool. Ample parking space. Basic equipment included. General practitioner needed. Telephone 451-4836.

FOR SALE: Doctor's combined home-office, large corner lot, Northwest Washington. Office wing, over 1300 sq. ft., includes reception room, consultation room, nurse's area, 5 treatment rooms. X-ray room, laboratory, bath; separate entrance. Custom-built stone and brick rambler, air-conditioned. Detached 2-car garage. Address Box 58, 2007 Eye Street, N.W., Washington, D.C. 20006.

OFFICE SPACE AVAILABLE

FOR RENT: Available in fall 1966, offices in new UNIVERSITY MEDICAL BUILDING now under construction at 2143 K Street, N.W. Suites custom-designed to meet needs of physicians and patients. Some choice locations still available. Telephone MR. MORRISON, Shannon & Luchs Company, 900 17th Street, N.W., 296-2345.

FOR RENT: NEW MEDICAL BUILDING, 1726 Eye Street, N.W. Ideal space available for general practitioner or specialist. Large suite for dentist also available. All utilities included plus switchboard service and central air-conditioning; parking available. Telephone 298-6936.

TO SHARE: Surgeon in modern medical building in suburban Virginia wishes to share offices; joint reception room, private consultation room. Address Box 30, 2007 Eye Street, N.W., Washington, D. C. 20006.

TO SHARE: Internist will share 875 sq. ft. suite and facilities, designed for 2 specialists, in new, downtown medical office building. For further information telephone 298-6520.

TO SUBLET: Internist's offices downtown, in modern building, beginning July. X-ray room included. Equipment available. Reasonable rent. Write or telephone DR. MAURICE A. SISLEN, 1712 Eye Street, N.W., Washington, D. C. 20006; telephone 298-8433.

FOR RENT: Office space, approx. 750 sq. ft., available immediately in NEW DOCTORS BUILDING, 1712 Eye Street, N.W. Telephone 298-7055, MR. SMITH or MRS. BRITO.

TO SHARE: Large, equipped private office, with parking facilities, in choice D. C. location. Reasonable rent. Telephone Decatur 2-7641.

"Cappy"

INTRODUCES THE WASHINGTON AREA SPECIALISTS *in collections for Professionals*

I'M
"Cappy"
an Old Fashioned girl with MODERN ideas about bill collecting

Unless We Collect, There Is No Charge

We offer a complete collection service to bring about prompt payments in a dignified, diplomatic manner for those lacking adequate facilities for enforced collections.

'PHONE 882-2000

CAPITAL CREDIT CORP.

7600 GEORGIA AVENUE, N.W. WASHINGTON 12, D.C.

Classified Advertisements (*Continued*)

TO SHARE: Completely furnished offices, on first floor, in Langley Park, Md. Telephone 779-1700.

TO SHARE: Surgeon in Eye Street medical building wishes to share office; separate consultation room. Address Box 43, 2007 Eye Street, N.W., Washington, D.C. 20006.

FOR RENT: Excellent physicians' suites in MONTGOMERY HOUSE, 4401 East-West Highway. Choice suburban location, 2 blocks to center of Bethesda. Ample parking. Modern, air-conditioned building. Area newly zoned for professional use. Modest rentals, $240 and $306.50 per month. Telephone 652-6829 or Mr. Amatulli, H. G. SMITHY Co., Sterling 3-3300.

FOR RENT: Medical suite, partitioned; 800 sq. ft. available (can be reduced to 600). All utilities, including air-conditioning; private toilet. For complete information address MANAGER, 1800 EYE STREET MEDICAL BUILDING, or telephone Republic 7-4777.

EQUIPMENT FOR SALE

COLORIMETERS AND SPECTROFOTOMETERS; INTERNATIONAL CENTRIFUGE; FLAME PHOTOMETER; stainless steel DRYING OVENS. All in excellent condition. For sale cheap. Telephone 587-3477.

NEW LABORATORY, fully equipped, suitable for hematology, blood chemistries and urine examinations. Finest equipment made. Prefer to sell as a whole but would consider piecemeal sale. Telephone Hobart 2-1113.

"Registered Nurses—For Private Duty"

U. S. EMPLOYMENT SERVICE
PROFESSIONAL OFFICE
GRADUATE NURSES REGISTRY
SOLAR BUILDING
1000 16th St., N.W.—Room 705
WASHINGTON, D. C. 20212
CALL—DISTRICT 7-1129
24-hour telephone service—
7 days a week

NURSES REGISTRY
EXPERIENCED UNDERGRADUATE
& PRACTICAL NURSES

Recommended by Physicians
At Your Service for Day or Night Duty
in Washington and nearby area

CALL—RAndolph 6-6706

VISIT THESE
CONVENIENT RESIDENTIAL
COMMUNITIES FOR EXECUTIVES
AND PROFESSIONALS
built and sold by Gruver & Cooley
area builders for over 50 years

in Maryland:

Walnut Woods . . . take 70-S to Montrose Rd., right one block to Hitching Post Lane, right to Old Stage Rd., then right on Old Stage. Priced from $45,000.

Luxmanor . . . Take Old Georgetown Rd. north from 70-S for two blocks to New Lux Lane, turn left and follow the Luxmanor sign to Stephalee Lane. Priced from $58,000.

in Virginia:

Greenway Heights . . . from Beltway Exit 13 take Route 193 West for 2 miles to entrance on left, across from Madeira School. Priced from $52,000.

all open daily until dark

Gruver & Cooley
BUILDERS

5301 Wisconsin Ave., N.W. KE 7-1120
evenings and weekends call Mr. Stoner, EM 5-0867

Physicians—
ATTENTION!
Now ready for occupancy
BOULEVARD MEDICAL CENTER
8301 Arlington Blvd. (Rte. 50)
—Just west of Gallows Road
—Just west of Rte. 495
—Adjacent to Fairfax Hospital

In the heart of Northern Virginia's
"hottest" growth area!

Leasing information:
MR. APPEL, 527-6660
POMPONIO PROPERTIES, INC.

PERPETUAL . . . a place they'll remember

Visitors to our Nation's Capital from across the ocean—and across the country—take home a lasting impression of Washington's famous "Monument to Thrift"... Perpetual Building Association! It's not because of the magnificent block long structure on E Street N.W. from 11th to 12th (although it is on the list of the Government's suggested business tours) but of the *idea* that built it. Perpetual now has over 180,000 customers, and, being a *mutual* institution, each shareholder owns a *part* of the association. Their pride in such ownership is reflected in their loyalty. Yes, its a great place to visit...and an even greater place to save money!

PERPETUAL
BUILDING ASSOCIATION
EDWARD C. BALTZ, *President*
MAIN OFFICE: 11TH AND E STREETS NORTHWEST
"A Savings Institution . . . Dedicated to Thrift"
RESOURCES: $500,000,000.00

FEDERAL SAVINGS AND LOAN INSURANCE CORPORATION
SAFETY OF YOUR SAVINGS
INSURED
UP TO $10,000

INDEX OF ADVERTISERS

**These Advertisers Support Your Journal.
Please Give Them Your Support.**

Page

Bank
- Riggs National Bank 4

Blood Service
- Metropolitan Washington Blood Banks 45

Building & Loan Association
- Perpetual Building Association 48

Business Counseling
- Professional Business Management 40

Collection Agencies
- Capital Credit Corporation 46
- Credit Bureau 5

Equipment & Supplies
- Accredited Surgical Sales 40
- Beuchler's, Inc. 40
- Gibson Company T-168
- Jobst Institute, Inc. 42
- Nelson Kloman Surgical Supply Company 42

Funeral Home
- S. H. Hines & Company 50

Home Builders
- Gruver & Cooley 47

Insurance
- McDermott Insurance 45
- Mutual of Omaha 3-C
- Russell, Marsh & Kennedy, Inc. 6
- St. Paul Insurance Companies 29

Investment Planning
- Ferris & Company 40

Nurse Registries
- Association of Undergraduate and Practical Nurses Registry 47
- Capital Nurse Registry T-150
- U. S. Employment Service for D. C. 47

Office Space
- Georgetown Doctors Park 9
- Pomponio Properties, Inc. 47
- Shannon & Luchs Co. 24

Pharmaceuticals
- Ames Company 8
- Armour Pharmaceutical Company 43–44
- Bristol Laboratories 20–21
- Burroughs Wellcome & Company T-157
- Geigy Pharmaceuticals 10
- Hynson, Westcott & Dunning, Inc. 3
- Lakeside Laboratories, Inc. T-167, 169, 171, 173; 33, 35, 37, 39
- Lederle Laboratories 7, 17, 26–27, 30, 41
- Eli Lilly & Company 32
- Parke, Davis & Company 2-C
- Pfizer Laboratories, Inc. 12–14
- Wm. P. Poythress & Company 11
- Roche Laboratories 4-C
- Schering Corporation T-158–159
- G. D. Searle & Company T-146–147
- Smith, Kline & French Laboratories 23
- E. R. Squibb & Co. 28
- Walker Laboratories T-164
- Wallace Laboratories 18–19, 31; T-160
- Winthrop Laboratories 15

Pharmacies
- Higger's Drugs 40
- Maxwell & Tennyson T-180
- Peoples Drug Stores 22

Sanitariums
- Kalorama Convalescent Home 42
- Kensington Gardens Nursing Home 16
- Magnolia Gardens Nursing Home 45

T–text

ESTABLISHED 1873

WOMEN ASSISTANTS

In Washington and Suburbs

CALL COLUMBIA 5-7023
(Six Trunk Lines)

The S. H. Hines Company

Funeral Home

2901-03-05-07 FOURTEENTH STREET N.W
Northeast corner Harvard and 14th Streets

W. R. FRANK HINES
President and General Manager

MODERN AIR-CONDITIONED ROOMS WITH CHAPEL, PIPE ORGAN AND REPOSING ROOMS ARRANGED TO MEET EVERY REQUIREMENT AT NO ADDITIONAL CHARGE. CREMATIONS.

No forfeiture of VETERAN'S BURIAL ALLOWANCE

THE EXPENSE IS A MATTER OF YOUR OWN DESIRE

No Branch Establishments
Convenient parking facilities adjoining Funeral Home

ATTENTION!

All members of the Medical Society of the District of Columbia who are *now insured* under the official income protection insurance program!

The Administrator of your plan, in keeping with the principle of providing the best coverage available to members of the medical profession, is pleased to announce that increased benefits are now available to eligible members*:

- **Increased weekly benefits**
- **Longer term of coverage for sickness**

You will be contacted shortly to provide you with details of these improved benefits and to advise you how they can be used to modernize your plan of income protection insurance.

---

* This is an announcement only and does not contain any of the underwriting requirements for eligibility.

Joseph E. Jones, Administrator
1666 Connecticut Avenue, N.W.
Washington, D. C. 20009

Tel. 483-3100

Mutual
OF OMAHA

MUTUAL OF OMAHA INSURANCE COMPANY
Life Insurance Affiliate: United of Omaha
Home Office: Omaha, Nebraska

The weight of clinical evidence favors Librium

With Librium (chlordiazepoxide HCl), the weight of a five-year record of efficacy and safety in clinical use is supported by over 630 reports in the medical literature. Its virtually specific antianxiety action normally reduces disturbing emotional complaints promptly without compromising the patient's mental alertness or ability to perform normal functions. Decisive results are often seen in patients who had not improved on previously used psychotropic drugs.

In prescribing: Dosage—Adults: Mild to moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. Geriatric patients: 5 mg b.i.d. to q.i.d.

Side Effects: Side effects, usually dose-related, include drowsiness, ataxia, minor skin rashes, edema, menstrual irregularities, nausea and constipation. When treatment is protracted, blood counts and liver function tests are advisable. Paradoxical reactions may occasionally occur in psychiatric patients. Individual maintenance dosages should be determined.

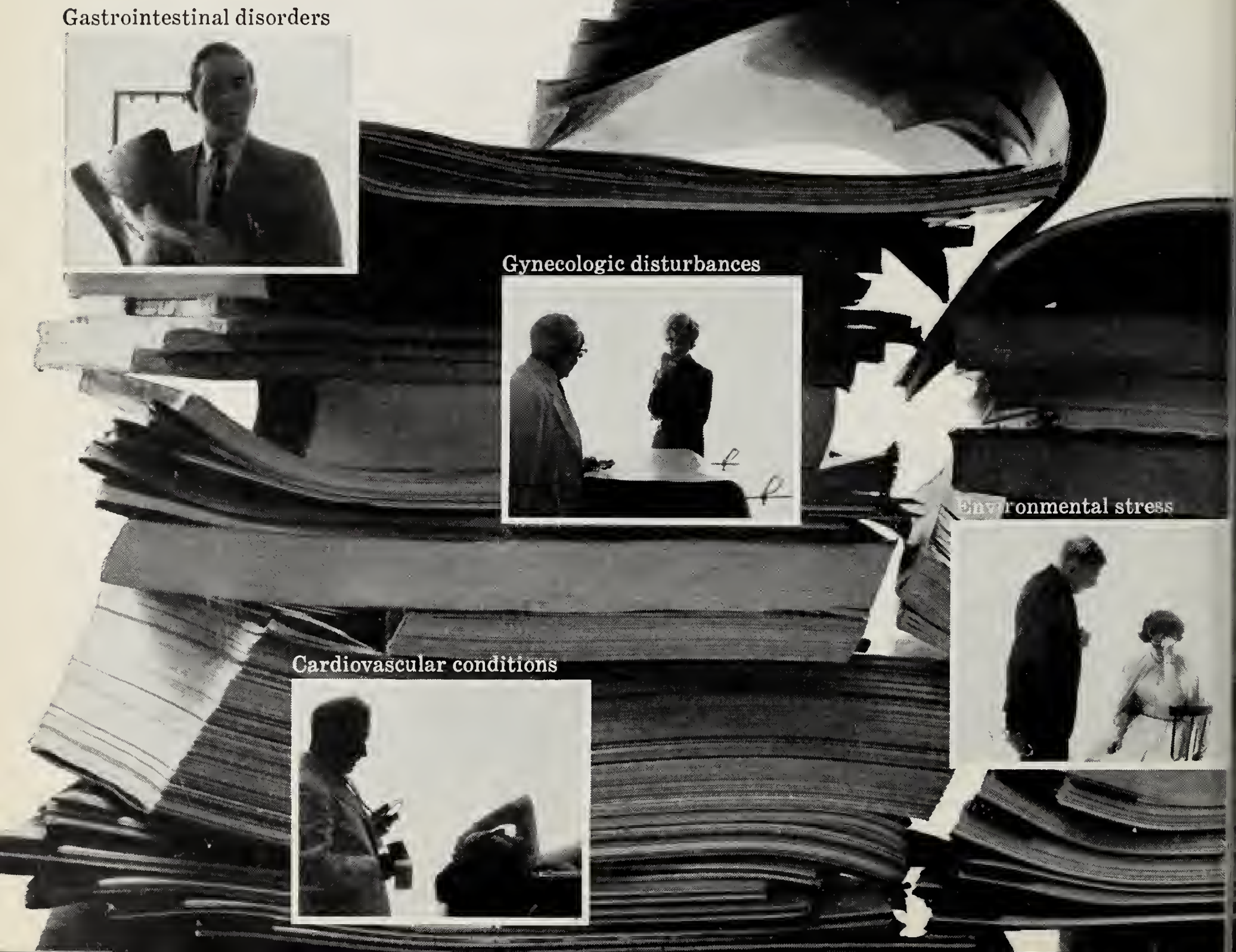
Precautions: Advise patients against possibly hazar
ous procedures until maintenance dosage is establish
Though compatible with most drugs, use care in co
bining with other psychotropics, particularly MAO i
hibitors or phenothiazines; warn patients of possib
combined effects with alcohol. Observe usual precautio
in impaired renal or hepatic function, in long-term trea
ment and in presence of depression or suicidal tendenci
Exercise caution in administering drug to addictio
prone patients or those who might increase dosage; wit
drawal symptoms, similar to those seen with barbiturat
or meprobamate, can occur upon abrupt cessation aft
prolonged overdosage. Caution should be exercised i
prescribing any therapeutic agent for pregnant patien

Supplied: Capsules, 5 mg, 10 mg and 25 mg, bottles of

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc., Nutley, N.J. 07110

LIBRIUM®
(chlordiazepoxide HCl)

Librium is indicated whenever anxiety is part of the clinical profile, such as in...



OPY 1

MEDICAL ANNALS of the DISTRICT OF COLUMBIA

FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
9 MAY 1966

DISPLAY
SHELVES

WALTER REED ARMY MEDICAL CENTER NUMBER

April, 1966 Vol. XXXV · No. 4

Peritoneal Dialysis
Capt. F. D. Schwartz, Maj. T. E. Davis, Lt. Col. J. L. Sherman, Jr., and Lt. Col. K. G. Barry

Sarcoidosis
Lt. Col. J. H. Richert and Capt. R. A. Klocke

Peritoneoscopy
Maj. A. L. Hitzelberger, Maj. G. W. Parker, Maj. D. E. Langdon, and Col. N. M. Scott, Jr.

Variations of the 17–18 Trisomy
Major Robert G. Scherz

Management of Esophageal Stenosis
Col. N. M. Scott, Jr., and Maj. A. L. Hitzelberger

Meningococcal Infections
Lt. Colonel Raymond W. Blohm, Jr.

(*Complete Index on page 5*)

THE MEDICAL SOCIETY OF
THE DISTRICT OF COLUMBIA
2007 *Eye Street Northwest*

among the most significant drugs in use toda

CHLOROMYCETI

(CHLORAMPHENICOL)

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit, Michigan 48232

Complete information for usage available to physicians upon reque

1866 1966
100
ANNIVERSARY

92

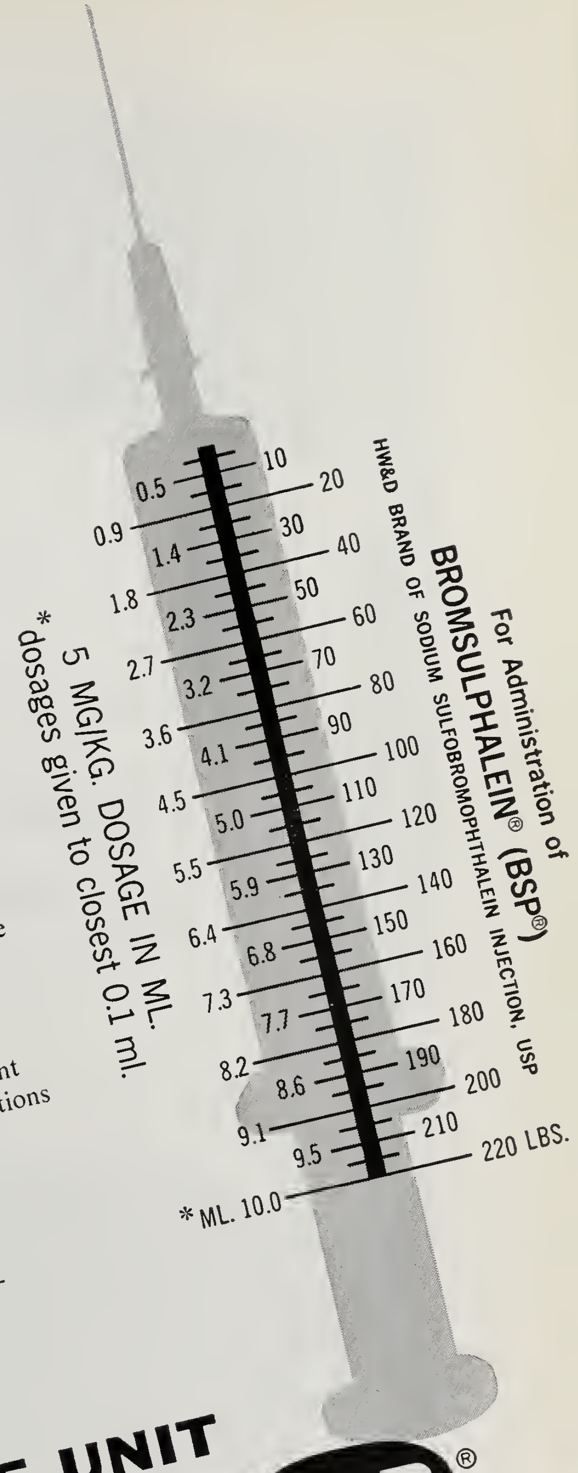
® DISPOSABLE UNIT
P® DISPOSABLE UNIT
P® DISPOSABLE UNIT
SP® DISPOSABLE UNIT
SP® DISPOSABLE UNIT
SP® DISPOSABLE UNIT
SP® DISPOSABLE UNIT
SP® DISPOSABLE UNIT
BSP® DISPOSABLE UNIT
BSP® DISPOSABLE UNIT
BSP® DISPOSABLE UNIT

A RELIABLE, PROVEN PRODUCT . . .
The BSP test, introduced in 1925, remains one of the most sensitive laboratory procedures available for determining hepatic function.

A STERILE, CONVENIENT PUT-UP . . .
Each BSP Disposable Unit contains: a sterile, glass, disposable syringe with the 5 mg./kg. BSP dosage schedule imprinted on the barrel, a sterile needle, alcohol swab and a 7.5 ml. or 10 ml. size ampule of Bromsulphalein.

The BSP unit is designed for maximum patient protection. The precalibrated syringe makes weight calculations unnecessary and provides for proper dosage regardless of patient-weight.

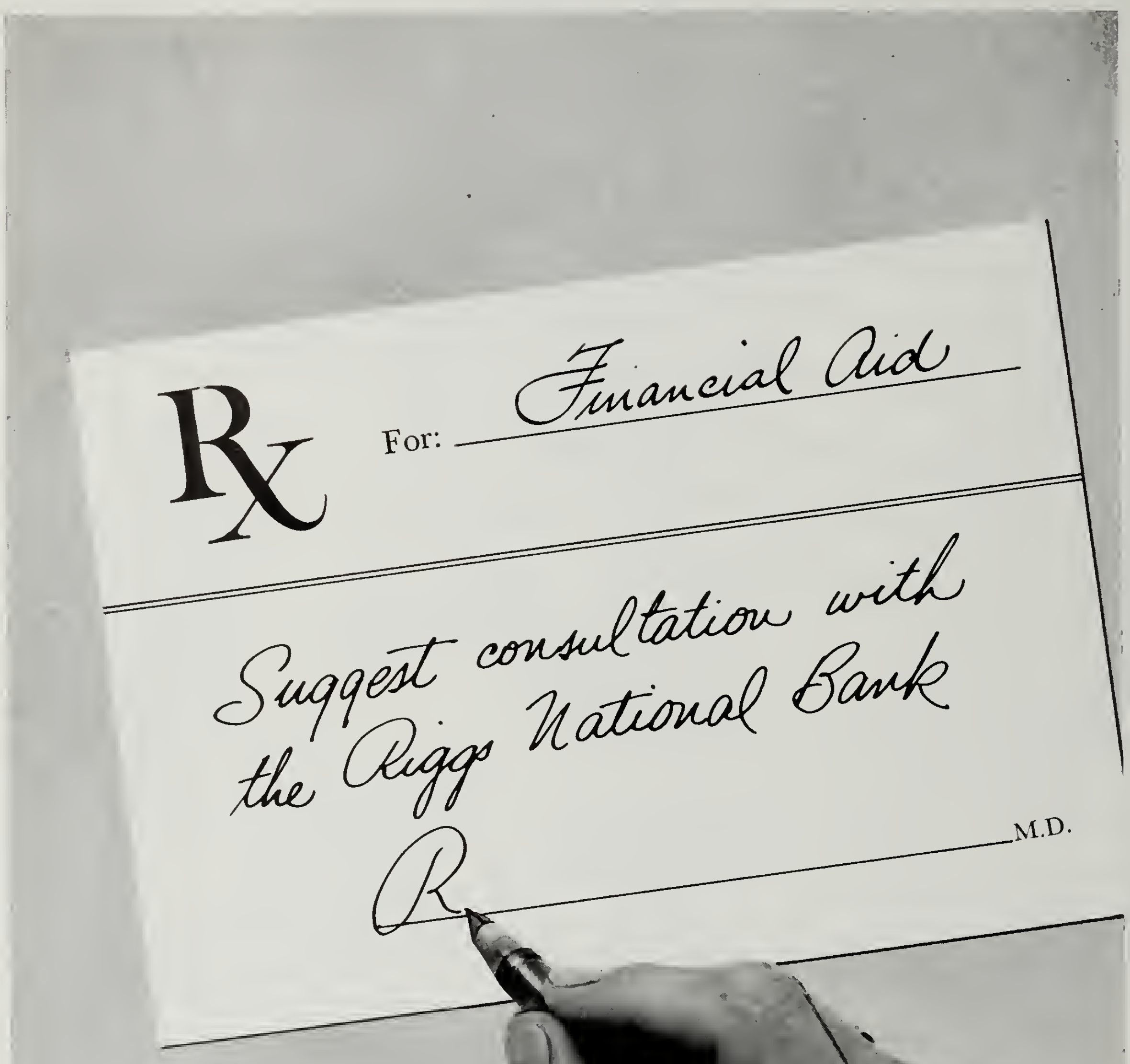
ECONOMICALLY PACKAGED . . .
Prepared for economic unit dispensing, this completely disposable put-up affords a savings in time and labor—the most costly commodities.


For Administration of
BROMSULPHALEIN® (BSP®)
HW&D BRAND OF SODIUM SULFOBROMOPHTHALEIN INJECTION, USP
5 MG/KG. DOSAGE IN ML.
*dosages given to closest 0.1 ml.
0.5
0.9
1.4
1.8
2.3
2.7
3.2
3.6
4.1
4.5
5.0
5.5
5.9
6.4
6.8
7.3
7.7
8.2
8.6
9.1
9.5
*ML. 10.0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200
210
220 LBS.

BSP®

BSP® DISPOSABLE UNIT
HW&D BRAND OF SODIUM SULFOBROMOPHTHALEIN INJECTION, USP
(50 mg. per ml.)

HYNSON, WESTCOTT & DUNNING, INC.
BALTIMORE, MARYLAND 21201
(BSP02)
HW&D


℞ For: Financial Aid
Suggest consultation with the Riggs National Bank
R
M.D.

The
RIGGS
NATIONAL BANK
of WASHINGTON, D.C.
FOUNDED 1836

Member Federal Reserve System • Member Federal Deposit Insurance Corporation

MEDICAL ANNALS of the District of Columbia

EDITORIAL OFFICE:
2007 Eye Street, N.W., Washington, D.C. 20006
Telephone 223-2230

Copyright ©, 1966
by The Medical Society
of the District of Columbia

Yearly Subscription, $5.00
Single Number, 50¢

Second-class postage paid at Baltimore, Md.
Published monthly at
Mount Royal and Guilford Avenues,
Baltimore, Maryland 21202

Contents for April

WALTER REED ARMY MEDICAL CENTER NUMBER

SCIENTIFIC ARTICLES

Peritoneal Dialysis: An Appraisal of Its Value in Acute Renal Failure. *Captain Franklin D. Schwartz, MC, USAR*, Chicago; *Major Thomas E. Davis, MC, USA*, Washington; *Lt. Colonel Jacques L. Sherman, Jr., MC, USA*, Brooklyn, N. Y., *and Lt. Colonel Kevin G. Barry, MC, USA*, Washington 181

Sarcoidosis: Long-term Follow-up of Pulmonary Function. *Lt. Colonel Joel H. Richert, MC, USA, and Captain Robert A. Klocke, MC, USA*, Washington 188

Experiences with Peritoneoscopy at Walter Reed General Hospital, 1964–1965. *Major Anton L. Hitzelberger, MC, USA, and Major Gerald W. Parker, USAF, MC*, Washington; *Major David E. Langdon, USAF, MC*, Camp Springs, Md., *and Colonel Norman M. Scott, Jr., MC, USA*, Washington 192

Pathologic Variations of the 17–18 Trisomy. *Major Robert G. Scherz, MC, USA*, Washington 195

The Management of Esophageal Stenosis. *Colonel Norman M. Scott, Jr., MC, USA, and Major Anton L. Hitzelberger, MC, USA*, Washington 201

Meningococcal Infections. *Lt. Colonel Raymond W. Blohm, Jr., MC, USA*, Washington 205

(Continued on page 6)

ONLY ONE FIRM CAN PROVIDE ALL THESE SERVICES, OR ANY ONE OF THEM...

- A complete low-cost patient billing service
- Confidential information on every account
- An ethical and effective collection service
- A dignified pre-collection service
- Professional accounts receivable consultation

THE CREDIT BUREAU, INC.

FOUR OFFICES TO SERVE YOU LOCALLY

WASHINGTON, D.C.; ROCKVILLE, MD.; FAIRFAX, VA.; ALEXANDRIA, VA.

3,000 CLOSELY ASSOCIATED AGENCIES THROUGHOUT THE COUNTRY

Call Now to Arrange an Appointment with Our Representative

ASSOCIATED CREDIT BUREAUS OF AMERICA, INC.
MEDICAL CREDITS DIVISION

ED GARRETSON NAtional 8-0680

Contents for April
(*Continued*)

EDITORIALS

Let Us Persevere in Fight Against Cancer 214
Infants and Children and Tuberculosis Skin-testing 214
The Healing Team—Myth or Reality? 215

MISCELLANY

Increase in AMA-ERF Loan Interest 187
President's Page: The Advent of Medicare 211
Report on the AMA National Symposium on Venereal Disease Control. *John A. Kenney, Jr., M.D.*, Washington 217
PHS Guidelines for Compliance with Title VI of Civil Rights Act 219
Section on Ophthalmology of the D. C. Medical Society: Resolutions Adopted December 7, 1965 221
Health Dept. Notes: The Need for New Medical Facilities in D. C. *Murray Grant, M.D., D.P.H.*, Washington 222
Cancer Programs Approved by ACS 222
Woman's Auxiliary Notes: Community Service Report. *Mrs. George A. Boinis*, Chevy Chase, Md. 223
New Clinical Center Studies 223
News and Personals 225
Correspondence 232
Obituaries 232
Medical Annals Staff and Officers of Medical Society *Adv. 23*
Over the Desk *Adv. 26*
National and Regional Meetings *Adv. 32*
Book Reviews *Adv. 36*
Classified Advertisements *Adv. 48*
Books Received *Adv. 50*
Index of Advertisers *Adv. 55*

INSURANCE FOR THE DOCTOR

***PROFESSIONAL LIABILITY**

OFFICE PUBLIC LIABILITY

LOW COST TERM LIFE INSURANCE

and

EMPLOYEES WORKMEN'S COMPENSATION
EQUIPMENT FLOATER
FIRE INSURANCE CONTENTS
BUSINESS EXPENSE DISABILITY
BONDS ON EMPLOYEES

AUTOMOBILE INSURANCE
ANNUITIES—FIXED & VARIABLE
NON-CAN DISABILITY INCOME
PENSION PLANS FOR DOCTORS
PENSION PLANS FOR EMPLOYEES

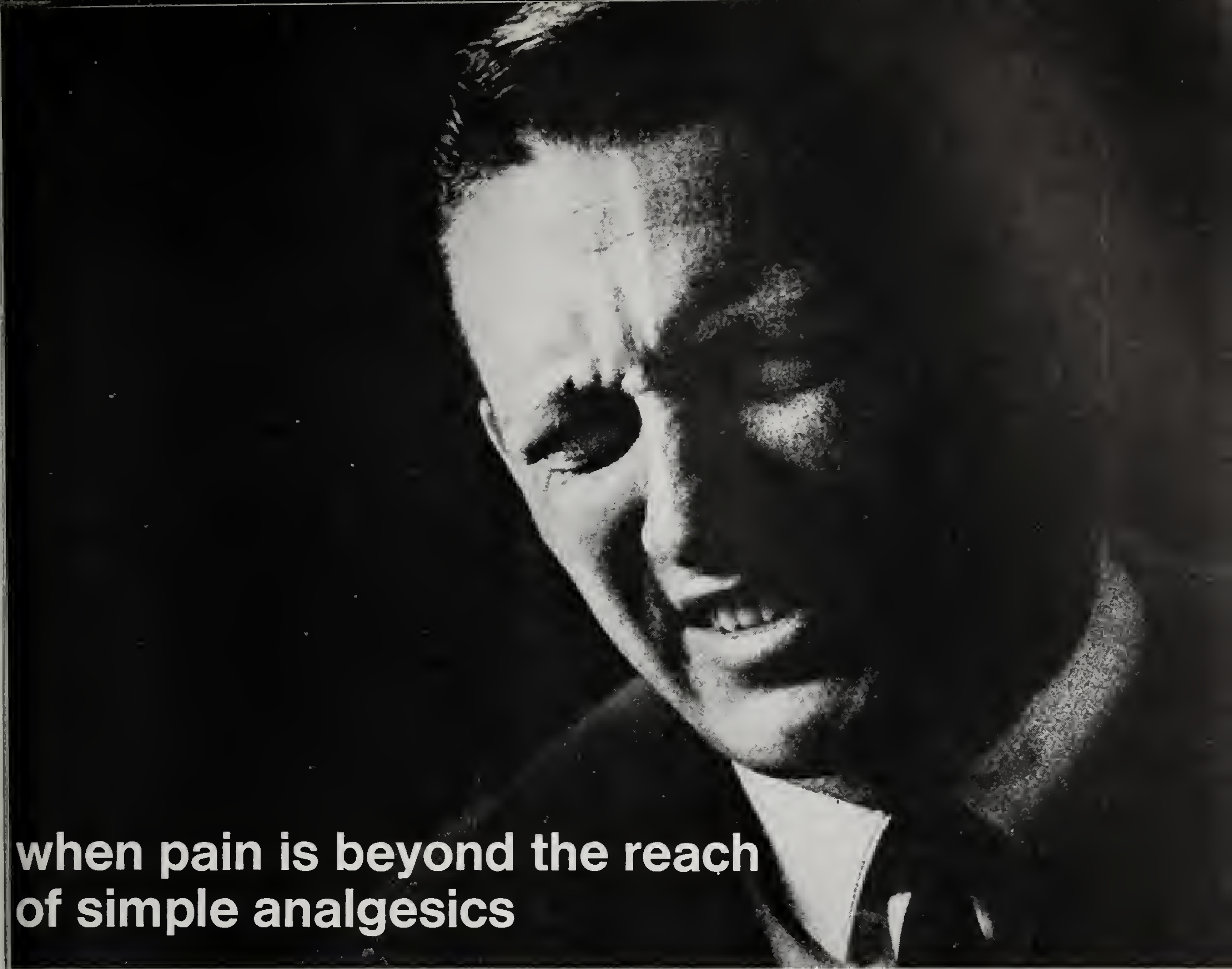
$1,000,000 CATASTROPHE LIABILITY

*endorsed by the Medical Society of the District of Columbia

Russell, Marsh & Kennedy, Inc.

WILLIAM G. RUSSELL
President

5151 Wisconsin Ave., N.W.
Telephone: 244-7600


when pain is beyond the reach
of simple analgesics

In the management of mild to moderate pain, give your patients comprehensive relief. TRANCO-GESIC extends the range of usefulness of aspirin by dimming pain perception—and *also* reducing mental and muscle tension.

TRANCO-GESIC®
tablets
chlormezanone 100 mg. with aspirin 300 mg.

subdues the major contributors to pain:

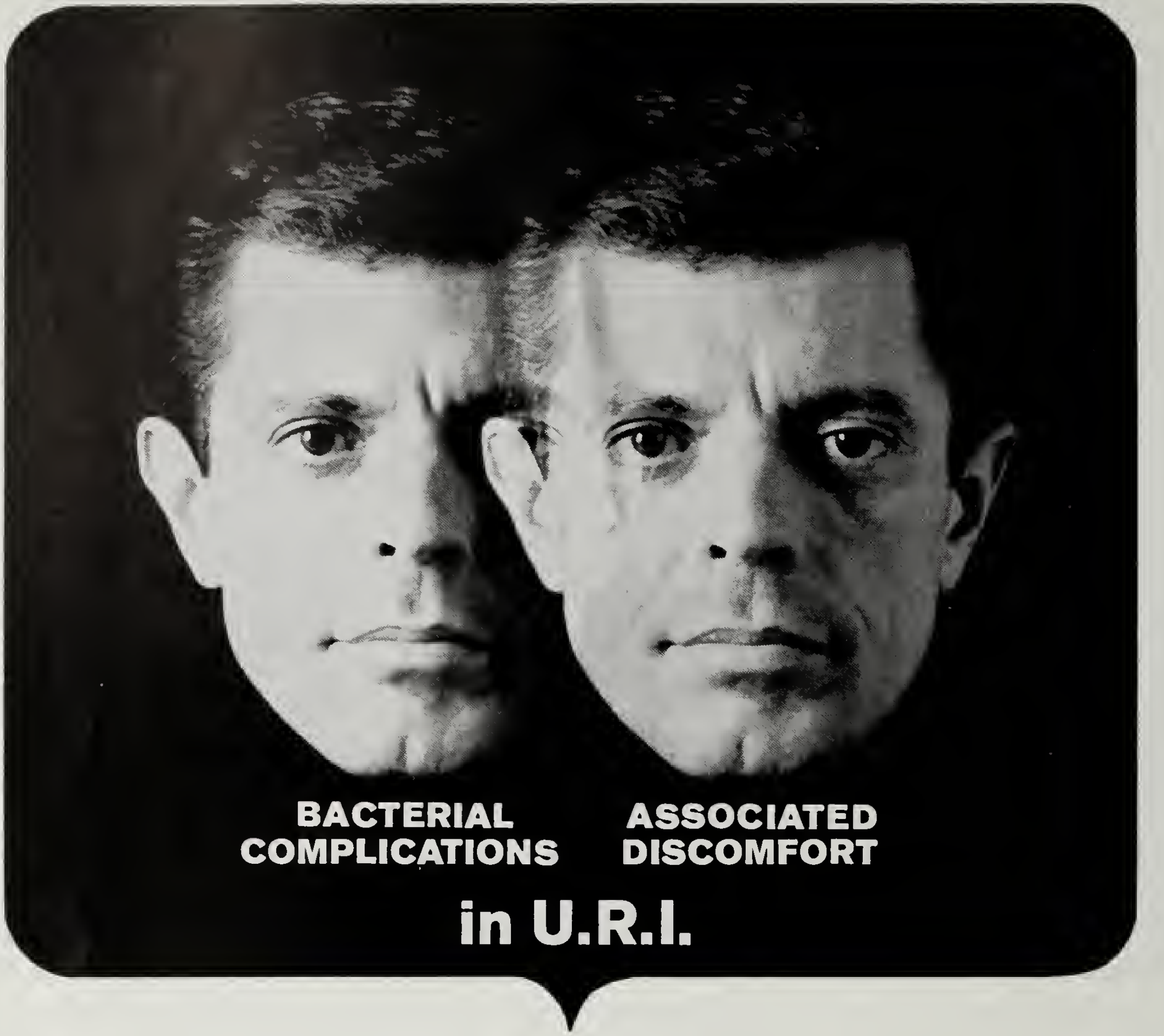
- pain perception
- mental tension
- muscle tension-spasm

TRANCO-GESIC is so well tolerated it can be prescribed for anyone who can take aspirin. It is non-narcotic, and free from dangers of addiction, habituation, or dependence. TRANCO-GESIC is effective in all types of mild and moderate pain. Of 862 patients who were treated with chlormezanone and aspirin for various disorders, 88% reported excellent or good pain relief.[1]

Side effects have been minor. Occasionally gastric distress, weakness, sedation or dizziness occur. Reversible cholestatic jaundice has been reported on rare occasions. However, in 4,653 patients treated with chlormezanone, 97.7% had *no* side effects.[1] *Contraindication:* just one: sensitivity to aspirin. *Dosage:* Adults, usually 2 tablets three or four times daily. Children (from 5 to 12 years), 1 tablet three or four times daily.

1. Collective studies, Department of Medical Research, Winthrop Laboratories.

Winthrop WINTHROP LABORATORIES, NEW YORK, N. Y. 10016



BRING THE TREATMENT TOGETHER IN A SINGLE PRESCRIPTION

ACHROCIDIN®

Tetracycline HCl-Antihistamine-Analgesic Compound

Each tablet contains:

ACHROMYCIN® Tetracycline HCl	125 mg	Caffeine	30 mg
Acetophenetidin (Phenacetin)	120 mg	Salicylamide	150 mg
		Chlorothen Citrate	25 mg

Effective in controlling complicating tetracycline-sensitive bacterial infection and providing symptomatic relief in allergic diseases of the upper respiratory tract. Possible side effects include drowsiness, slight gastric distress, anorexia, overgrowth of nonsusceptible organisms, tooth discoloration (if given during tooth formation), photodynamic reaction to sunlight and increased intracranial pressure (in young infants). Contraindication: History of hypersensitivity to tetracycline. Average adult dosage: 2 tablets four times daily, given at least one hour before, or two hours after meals. Patient should avoid direct exposure to artificial or natural sunlight; and should not drive a car or operate machinery while on drug. Reduce dosage in impaired renal function. Stop drug immediately at the first sign of adverse reaction.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N.Y. Lederle

6085-2911

"The most important single ingredient in the restoration of normal bowel function is a soft formed bulk of proper consistency"

YOU CAN SAFELY AND EFFECTIVELY PROVIDE THIS INGREDIENT WITH EITHER KONSYL OR L.A.FORMULA

bp
KONSYL
PLANTAGO
OVATA
COATING
BURTON, PARSONS & CO

bp
L. A.
FORMULA
PLANTAGO
OVATA
COATING
BURTON, PARSONS & CO.

A mixture of pure hemicelluloses

Pure hemicellulose dispersed in lactose and dextrose

- **in DIARRHEA** . . . Konsyl and L. A. Formula absorb free fecal water to create a formed gel and normal stools.
- **in CONSTIPATION** . . . Konsyl and L. A. Formula retain water in the stool against the strong dehydrating function of the colon.
- Since a liquid stool contains only 10 per cent more water than the hardest scybalum*

KONSYL

For the obese patient who needs calorie free medication

L.A.FORMULA

For the finicky eater who requires unsurpassed palatability

are the

the bowel normalizers of choice

Made by

BURTON, PARSONS & CO., Inc.
Since 1932 Originators of Fine Hydrophilic Colloids
Washington 27, D. C.

**Tainter, M.L. and Buchanan, O.H., Ann. N.Y. Acad. Sc. 54:438, 1954*

in senile agitation...

Her only comfort in life is her dog... Crowds distress her... She grows agitated when her pension check is late.

This anxious patient and others can feel more comfortable on Vistaril... because Vistaril calms smoothly, makes them feel better without the euphoria or psychic overgratification that fosters habituation.

What is Vistaril? Vistaril is hydroxyzine, a tranquilizer entity, totally different from the diazepines, meprobamates and the phenothiazines. While equal to the diazepines and meprobamates in effectiveness, Vistaril has been remarkably free of the unwanted psychic and somatic reactions associated with other tranquilizing agents because its primary effect is exerted at the seat of anxiety.

Vistaril tranquilizes with less complication than do the phenothiazines. Unwanted effects, such as hepatotoxicity, blood dyscrasias, skin pigmentation, and opacities of lens and cornea, are not characteristic of Vistaril activity.

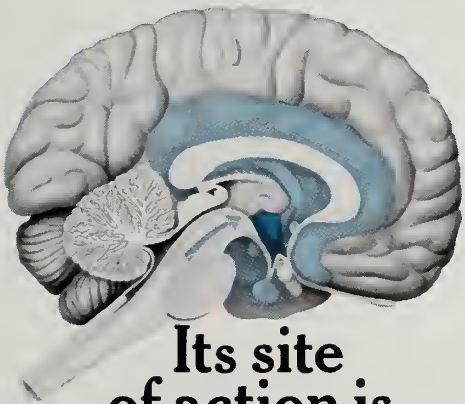
Vistaril tranquilizes with less complication than do the minor tranquilizers. Withdrawal symptoms, possible psychotropic drug incompatibilities, blood dyscrasias and hepatotoxicity, seen with some minor tranquilizers, are not characteristic of Vistaril.

Pfizer Since 1849

Science for the world's well-being®

No other tranquilizer is as precise, as uncomplicated, as Vistaril®

(HYDROXYZINE)



Its site of action is the seat of anxiety

Turn page for brief summary...

The record of hydroxyzine experience:

Eight years of clinical effectiveness, over 1,000,000,000 doses prescribed, more than 500 published papers covering nearly 15,000 patients...

Contraindications: Hypersensitivity to hydroxyzine. The parenteral solution, for intramuscular or intravenous use, *must not* be injected subcutaneously or intra-arterially.

Precautions: Hydroxyzine may potentiate the action of central nervous system depressants. In conjunctive use, dosage for these drugs should be decreased. Because drowsiness may occur, patients should be cautioned against driving a car or operating dangerous machinery. The usual precautions for intramuscular injection should be followed; soft-tissue reactions have rarely been reported when proper technique has been used. On reported intravenous injection a few instances of digital gangrene have occurred distal to the injection site, considered to be due to inadvertent intra-arterial injection or periarterial extravasation. Therefore, particular caution should be observed to insure injection only into intact veins; avoid either intra-arterial injection or extravasation. Intravenous administration should be accomplished slowly, no faster than 25 mg. per minute, and not to exceed 100 mg. in any single dose.

Adverse Reactions: Drowsiness may occur; if so, it is usually transitory and may disappear in a few days of continued therapy or upon dosage reduction. Dryness of the mouth may be seen with higher doses. Involuntary motor activity has been reported in some hospitalized patients on higher than recommended dosage.

Supply: Vistaril (hydroxyzine pamoate) Capsules: 25 mg., 50 mg., 100 mg. Vistaril (hydroxyzine pamoate) Oral Suspension: 25 mg. per 5 cc. Vistaril (hydroxyzine HCl) Parenteral Solution: 25 mg./cc.—10-cc. vials, and 50 mg./cc.—2-cc. and 10-cc. vials.

More detailed professional information available on request.

The Vistaril site of action is the seat of anxiety

No other tranquilizer is as precise, as uncomplicated, as Vistaril® (HYDROXYZINE)

Science for the world's well-being®
Pfizer
Since 1849

PFIZER LABORATORIES
DIVISION, CHAS. PFIZER & CO., INC. NEW YORK, N.Y. 10017

The discomforts of

DIARRHEA
MUCOUS COLITIS
DIVERTICULITIS
SPASTIC URETERITIS
BLADDER SPASM

. . . are relieved by direct musculotropic action with

Trocinate®

BRAND THIPHENAMIL HCl

Available in 100 milligram pink sugar-coated tablets.

The high therapeutic index permits dosage sufficient to relieve spasm promptly. The usual initial dose is 4 tablets. Maintenance dosage is usually one or two tablets 4 times a day.

Trocinate *BRAND* THIPHENAMIL HCl

BETA-DIETHYLAMINOETHYL DIPHENYLTHIOACETATE HYDROCHLORIDE

. . . directly relaxes smooth muscle spasm
. . . combats hypermotility
. . . non-mydriatic – may be used in glaucoma

Trocinate (Thiphenamil HCl) has been found in three clinical studies, (J. Mo. Med. Assoc., 48:685-6; Med. Rec. & Annals, 43:1104-6; J. Urol., 73:487-93), to be effective and to be free of side-effects. Fifteen years of wide clinical usage has affirmed the safety and effectiveness of Trocinate.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA
Manufacturers of ethical pharmaceuticals since 1856

When tetracycline is indicated in these candidates for Candida...

New
low-cost
tetracycline/
antifungal
therapy

Tetrex®-F

tetracycline
phosphate complex
–nystatin

Because new Tetrex-F (tetracycline phosphate complex-nystatin) is the most economical therapy of its kind that you can prescribe, it is a sound choice whenever tetracycline therapy is indicated in patients predisposed to monilial infections.

Who are these "candidates for Candida"?

1. diabetic patients
2. nonpregnant women with a history of recent or recurrent monilial vaginitis
3. elderly or debilitated patients
4. patients with a past history of moniliasis
5. patients on long-term tetracycline or corticosteroid therapy.

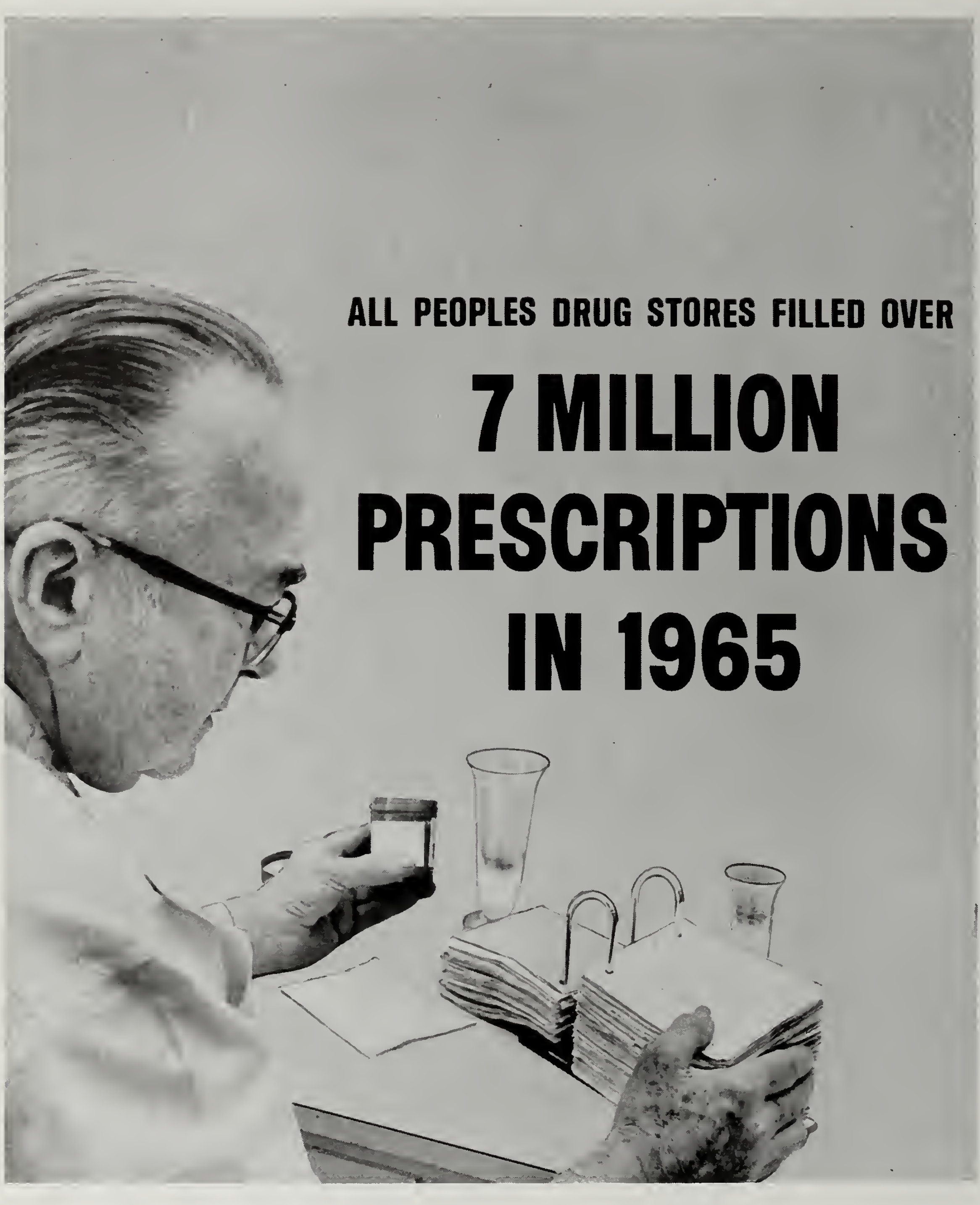
For these patients, Tetrex-F (tetracycline phosphate complex-nystatin) provides efficient tetracycline therapy against a broad range of infections *plus* protection against superinfection associated with the overgrowth of *C. albicans* in the G.I. tract.

Priced for savings

Tetrex-F (tetracycline phosphate complex-nystatin) is lowest in cost—priced 20% lower than most tetracycline/antifungal products.

BRISTOL THERAPEUTIC SUMMARY
For complete information consult Official Package Circular.
Indications: Infections of respiratory, gastrointestinal and genitourinary tracts and skin and soft tissues due to tetracycline-sensitive organisms, in patients with increased susceptibility to monilial infections.
Contraindications: The drug is contraindicated in patients hypersensitive to its components.
Warnings: Photodynamic reactions have been produced by tetracyclines. Natural and artificial sunlight should be avoided during therapy. Stop treatment if skin discomfort occurs. No cases of photosensitivity have been reported with Tetrex (tetracycline phosphate complex). With renal impairment, systemic accumulation and hepatotoxicity may occur. In this situation, lower doses should be used. Tooth staining and enamel hypoplasia may be induced during tooth development (last trimester of pregnancy, neonatal period and childhood).
Precautions: Bacterial superinfection may occur. Infants may develop increased intracranial pressure with bulging fontanels. In gonorrheal therapy, serologic tests for syphilis should be conducted initially and monthly for 3 months.
Adverse Reactions: Glossitis, stomatitis, nausea, diarrhea, flatulence, proctitis, vaginitis, dermatitis, and allergic reactions may occur.
Usual Adult Dosage: 1 capsule q.i.d. Continue therapy for 10 days in beta-hemolytic streptococcal infections. Administer one hour before or 2 hours after meals.
Supply: Capsules, bottles of 16. Each capsule contains tetracycline phosphate complex equivalent to 250 mg. tetracycline HCl activity and 250,000 units of nystatin. Oral Suspension, 60-ml. bottle. Each 5 ml. contains tetracycline equivalent to 125 mg. tetracycline hydrochloride and nystatin, 125,000 units.

BRISTOL
BRISTOL LABORATORIES
Division of Bristol-Myers Co.
Syracuse, New York


ALL PEOPLES DRUG STORES FILLED OVER
7 MILLION PRESCRIPTIONS IN 1965

a measure of the trust people have in Peoples

Hands. Minds. Hearts that **care. Dedicated** pharmacists who are proud of Peoples' reputation. You can depend on these men and women, just as you can depend on Peoples to fill **your** prescription efficiently, courteously and professionally. Remember, at Peoples, **nothing** is as important as your prescription.

PEOPLES
PRESCRIPTION DRUG STORES

In Fractures: B and C vitamins are therapy

Stress formula vitamins are a key factor in bone and tissue regeneration. To meet the increased metabolic demands, STRESSCAPS offers therapeutic amounts of B and C vitamins as an aid to smoother convalescence and earlier rehabilitation. In fractures, as in many other conditions of physiologic stress, STRESSCAPS vitamins are therapy.

STRESSCAPS® FOR PROFESSIONAL RECOMMENDATION ONLY

Stress Formula Vitamins Lederle

Each capsule contains:	
Vitamin B_1 (Thiamine Mononitrate)	10 mg.
Vitamin B_2 (Riboflavin)	10 mg.
Niacinamide	100 mg.
Vitamin C (Ascorbic Acid)	300 mg.
Vitamin B_6 (Pyridoxine HCl)	2 mg.
Vitamin B_{12} Crystalline	4 mcgm.
Calcium Pantothenate	20 mg.

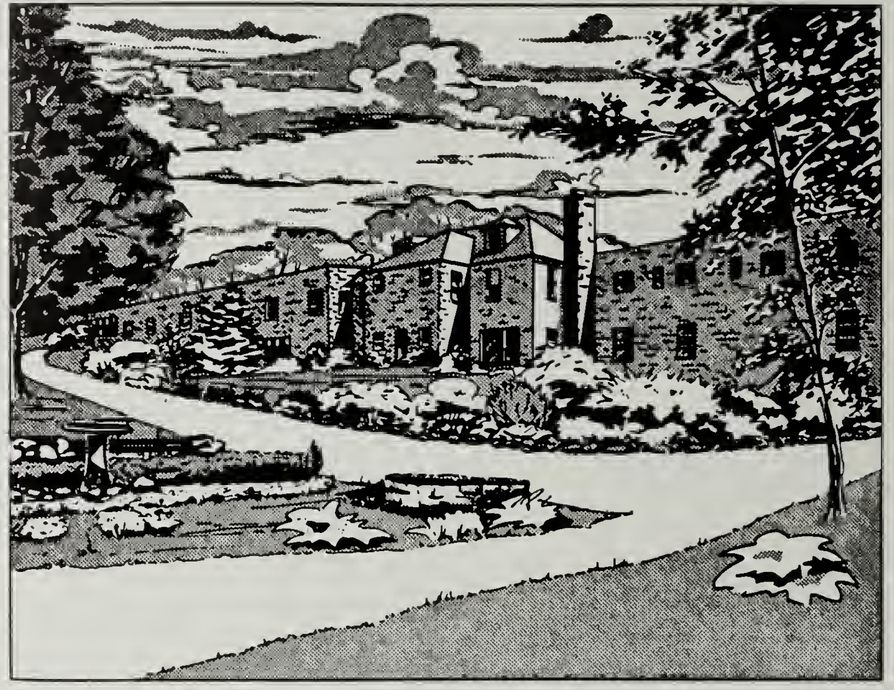
Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

Lederle LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N. Y.

7283-4

"All the Comforts of Home"..

POST OPERATIVE
MEDICAL
CONVALESCENT
DIABETIC
PARALYTIC
INVALID
AGED
CHRONIC
AMBULATORY
RETIRED
GUESTS, ETC.



AN ULTRA-MODERN HOME IN THE SUBURBS ON TEN ACRES WITH A COUNTRY ATMOSPHERE

KENSINGTON GARDENS SANITARIUM

★ A MEDICAL INSTITUTION UNDER THE SUPERVISION OF REGISTERED NURSES ★
LICENSED BY STATE AND COUNTY

3000 McComas Avenue Kensington, Maryland

- Rehabilitation Facilities
- Private and Semi-Private Rooms with Connecting Baths
- Beautifully Decorated
- Television in Spacious Lounges
- Large Porches
- Lovely Lawns and Shade Trees
- Supervised Diets
- Patients May Retain Their Own Physician
- 24-Hour Nursing Care
- Reasonable Rates
- Recreation and Physical Therapy

MEMBER OF

NATIONAL GERIATRICS SOCIETY
CARE OF THE AGED

AMERICAN NURSING HOME ASSOCIATION

MEMBER
AND MARYLAND NURSING HOME ASSOCIATION
ACCREDITED BY THE NATIONAL COUNCIL
FOR THE ACCREDITATION OF NURSING HOMES

For Further Information Phone

933-0060 or 933-0872

Proprietors-Administrators
LILLIAN H. and
GEORGE L. BRICKER

ECONOMY

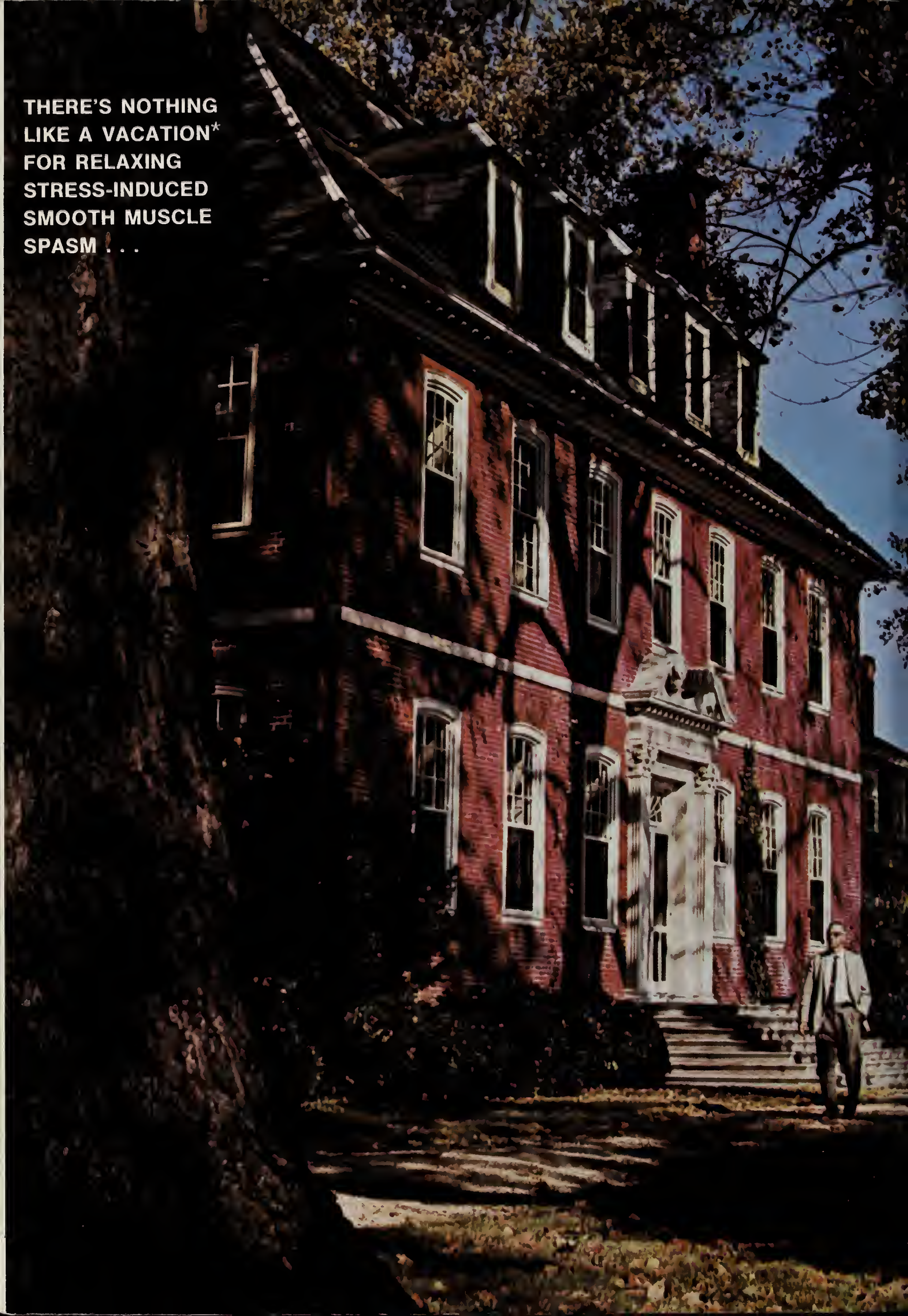
When you prescribe or recommend Allbee with C, you can be sure your patient is getting a rational, specific multivitamin formulation at an economical price. The potent formula is sensible and simple. It contains therapeutic amounts of the water-soluble B and C vitamins. These vitamins are expended rapidly in the body and need to be replenished frequently. There are no extraneous factors, no frills in Allbee with C. It's the no-nonsense vitamin in the yellow and green capsule that always gives your patient his money's worth.

Each capsule contains: Thiamine mononitrate (B_1), 15 mg.; Riboflavin (B_2), 10 mg.; Pyridoxine hydrochloride (B_6), 5 mg.; Nicotinamide, 50 mg.; Calcium pantothenate, 10 mg.; Ascorbic acid (vitamin C), 300 mg.

A. H. ROBINS COMPANY, INC.,
RICHMOND, VIRGINIA 23220
A·H·ROBINS

—a good reason for

ALLBEE® WITH C


THERE'S NOTHING
LIKE A VACATION*
FOR RELAXING
STRESS-INDUCED
SMOOTH MUSCLE
SPASM ! . .

. . . NOTHING, THAT IS,
EXCEPT THE SEDATIVE-ANTISPASMODIC
BENEFITS OF

DONNATAL®

There's nothing quite like a vacation to ease the pressures of the modern, "workingday" world. And for the patient who can't get away from it all, there's nothing quite like Donnatal to relax stress-induced smooth muscle spasm. For 31 years it has been the antispasmodic-sedative most often prescribed for relieving functional disturbances of tone and motility of the gastrointestinal tract.

belladonna alkaloids in optimally balanced ratio

In Donnatal, natural belladonna alkaloids are rationally balanced in a specific, fixed ratio that provides "the greatest efficacy with the smallest possible dose."[1] They avoid the clinical uncertainties of the variable tincture and extract of belladonna, and are considered superior in range of action to atropine alone.[2] Furthermore, they are generally recognized as being more effective than the synthetics for relieving visceral spasm.

phenobarbital for sedation

Years of clinical use have established phenobarbital as one of the most efficient and highly regarded sedatives. In fact, for general sedation it is the drug of choice.[3] In Donnatal, phenobarbital potentiates the spasmolytic effects of the belladonna alkaloids, lessening emotional tensions and checking the neurogenic impulses that trigger GI disorders.

more than 24 indications in PDR

Donnatal has withstood the test of time to become the classic sedative-antispasmodic because of its unsurpassed effectiveness, safety, economy, uniformity of composition, and dosage convenience. Its widespread acceptance and usage by the profession can also be attributed to its versatility in treating disorders characterized by smooth muscle spasm. There are more than two dozen distinct and separate indications for Donnatal listed in the current PDR.

IN EACH TABLET, CAPSULE, OR
(5 cc.) OF ELIXIR

hyoscyamine sulfate	0.1037 mg.
atropine sulfate	0.0194 mg.
hyoscine hydrobromide	0.0065 mg.
phenobarbital	(1/4 gr.) 16.2 mg.

(warning: may be habit forming)

IN EACH EXTENTAB

hyoscyamine sulfate	0.3111 mg.
atropine sulfate	0.0582 mg.
hyoscine hydrobromide	0.0195 mg.
phenobarbital	(3/4 gr.) 48.6 mg.

(warning: may be habit forming)

BRIEF SUMMARY: Blurring of vision, dry mouth, difficult urination, and flushing or dryness of the skin may occur on higher dosage levels, rarely on usual dosage. Administer with caution to patients with incipient glaucoma, or urinary bladder neck obstruction. Contraindicated in acute glaucoma, advanced renal or hepatic disease, or a hypersensitivity to any of the ingredients.

REFERENCES: 1. Vollmer, H.: Arch. Neurol. and Psychiat., 43:1057, 1940. 2. Morrissey, J.H.: J. Urology, 57:635, 1947. 3. Krantz, J.C., Jr., and Carr, C.J.: Pharmacological Principles of Medical Practice, 2nd ed., Baltimore (1954), 552.

*This one at Westover, elegant Colonial Virginia plantation, located on the James River near Richmond. Built in the early 1730's by William Byrd II, founder of Richmond, it is now the home of Mrs. Bruce Crane Fisher.

A. H. ROBINS COMPANY, INC., RICHMOND, VA.

A·H·ROBINS

The Pain Is Gone

Despite introduction of synthetic substitutes, efficacy of 'Empirin' Compound with Codeine remains unchallenged.

'Empirin'® Compound with Codeine Phosphate gr. 1/2 No. 3

Each tablet contains: Codeine Phosphate gr. ½ (Warning—May be habit forming), Phenacetin gr. 2½, Aspirin gr. 3½, Caffeine gr. ½.

Keeps the Promise of Pain Relief

BURROUGHS WELLCOME & CO. (U.S.A.) INC., TUCKAHOE, N.Y.

VOLUME 35 • APRIL 1966

EDITOR

Wallace M. Yater, M.D.

MANAGING EDITOR

George W. Cooley

ASSISTANT EDITOR

A. Louise Eckburg

EDITORIAL BOARD

Brian Blades, M.D.
Frederic G. Burke, M.D.
I. Phillips Frohman, M.D.
Naomi M. Kanof, M.D.
Zigmond M. Lebensohn, M.D.
Thomas M. Peery, M.D.
Herbert P. Ramsey, M.D.
George E. Schreiner, M.D.
Donald Stubbs, M.D.

CONSULTING EDITORS

Brig. Gen. Joe M. Blumberg, MC, USA, Director, Armed Forces Institute of Pathology
Irving B. Brick, M.D., Professor of Medicine, Georgetown University School of Medicine
W. Montague Cobb, M.D., Professor of Anatomy, Howard University College of Medicine
Vernon Knight, M.D., Clinical Director, National Institute of Allergy and Infectious Diseases
Walter Kurland, M.D., Chief, Outpatient Service, Veterans Administration Hospital
Colonel Loren F. Parmley, MC, USA, Chief, Department of Medicine, Walter Reed General Hospital
Alvin E. Parrish, M.D., Associate Professor of Medicine, George Washington University School of Medicine
Captain Rufus J. Pearson, Jr., MC, USN, Director of Professional Services, U.S. Naval Hospital

THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

OFFICERS

Robert J. Coffey, M.D., President*
Henry D. Ecker, M.D., President-elect*
Lawrence A. Rapee, M.D., First Vice President*
Claudine M. Gay, M.D., Second Vice President*
Mr. George W. Cooley, Secretary-Treasurer*

EXECUTIVE BOARD

J. Spencer Dryden, M.D., Chairman (1966)
Karl C. Corley, M.D. (1967)
Edward W. Nicklas, M.D. (1968)
Paul R. Wilner, M.D. (1969)

DELEGATES TO AMA

Raymond T. Holden, M.D.*
C. Willard Camalier, Jr., M.D.*

LEGAL COUNSEL

Mr. Warren E. Magee

---

* Ex officio member of the Executive Board

MEDICAL
ANNALS
of the
DISTRICT OF
COLUMBIA

2007 Eye Street, N.W. Washington, D.C. 20006

The MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA is published monthly by the Medical Society of the District of Columbia for the promulgation of information of scientific, general medical and personal interest. All articles and correspondence should be sent to DR. WALLACE M. YATER, EDITOR, MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA, 2007 Eye Street, N.W., Washington, D. C. 20006.

EXCLUSIVE PUBLICATION: Articles are accepted for publication on condition that they are contributed solely to this journal.

MANUSCRIPTS: Manuscripts must be typewritten, double-spaced, and the original copy submitted.

ILLUSTRATIONS: Photographs and drawings for illustrations must be carefully marked and show clearly what is intended. MEDICAL ANNALS will bear the cost of engravings for 2 illustrations accompanying manuscripts submitted for publication. The cost of more than 2 engravings must be borne by the author.

REFERENCES: References should include the name of author (last name and initials), exact title of article, name of periodical, with volume, page (day of month in weekly), and year. References should be numbered consecutively in the order in which they appear in the text.

COPYRIGHT: Matter appearing in the ANNALS is covered by copyright but, as a rule, no objection will be made to its reproduction in reputable medical journals, if proper credit is given. However, the reproduction for commercial purposes of articles appearing in the MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA must have the approval of the Editor.

REPRINTS: Reprints may be obtained at cost.

ADVERTISING: Pharmaceutical advertising must be approved by the State Medical Journal Advertising Bureau, Inc. Other advertising copy may be accepted subject to the approval of the Editor. All copy or plates must reach the ANNALS office by the first of the month preceding publication. Display and classified advertising rates will be furnished on request.

SUBSCRIPTIONS: Subscription is included in the annual dues of members. To non-members the annual subscription price is: domestic, $5.00; Canadian, $5.50; foreign, $6.00, including postage; single copies, 50 cents.

Checks, etc. should be made payable to the Medical Society of the District of Columbia.

Anatomy of
Low Back Pain #1
the sedentary life
is often the seat of
low back pain

The human spine is not engineered for prolonged sitting at desks, pianos, typewriters and drafting boards. The stresses set up by the heavy, forward-tilted head and trunk, balanced precariously on an insufficient base, result in strain of the dorsal musculature, particularly at the low lumbar level.

The unusual muscle-relaxant and analgesic properties of 'Soma' make it especially useful in the treatment of low back sprains and strains. 'Soma' is widely prescribed ☐ **to relieve pain** ☐ **to relax muscles** ☐ **to restore mobility.**

Indications: 'Soma' is useful for management of muscle spasm, pain, and stiffness in a variety of inflammatory, traumatic, and degenerative musculoskeletal conditions. It also may act to normalize motor activity in certain neurologic disturbances.

Contraindications: Allergic or idiosyncratic reactions to carisoprodol.

Precautions: 'Soma', like other central nervous system depressants, should be used with caution in patients with known propensity for taking excessive quantities of drugs and in patients with known sensitivity to compounds of similar chemical structure, e.g., meprobamate.

Side Effects: The only side effect reported with any frequency is sleepiness, usually on higher than recommended doses. An occasional patient may not tolerate carisoprodol because of an individual reaction, such as a sensation of weakness. Other rarely observed reactions have included dizziness, ataxia, tremor, agitation, irritability, headache, increase in eosinophil count, flushing of face, and gastrointestinal symptoms.

One instance each of pancytopenia and leukopenia, occurring when carisoprodol was administered with other drugs, has been reported, as has an instance of fixed drug eruption with carisoprodol and subsequent cross reaction to meprobamate. Rare allergic reactions, usually mild, have included one case each of anaphylactoid reaction with mild shock and angioneurotic edema with respiratory difficulty, both reversed with appropriate therapy. In cases of allergic or hypersensitivity reactions, carisoprodol should be discontinued and appropriate therapy initiated. Suicidal attempts may produce coma and/or mild shock and respiratory depression.

Dosage: Usual adult dose is one 350 mg. tablet three times daily and at bedtime.

Supplied: Two Strengths: 350 mg. white tablets and 250 mg. orange, two-piece capsules.

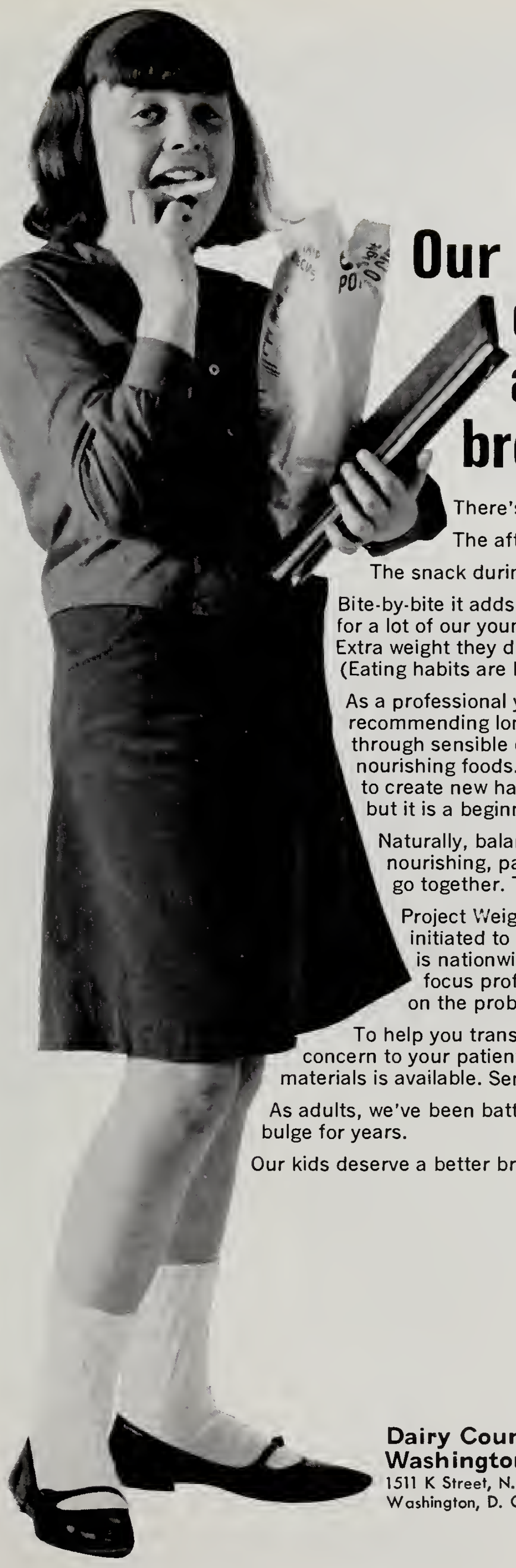
Before prescribing, consult package circular.

for the relief of low back sprains and strains

SOMA®

(CARISOPRODOL)

Wallace Laboratories, Cranbury, N.J.
26S01J



Our kids deserve a better break

There's the cola break.
The after-school break.
The snack during the TV-break.

Bite-by-bite it adds up to extra weight for a lot of our young people. Extra weight they don't need, and won't lose. (Eating habits are hard to break.)

As a professional you can help by recommending long-range weight control through sensible eating habits and nourishing foods. It's not likely to create new habits overnight, but it is a beginning.

Naturally, balanced diets and nourishing, palatable dairy foods go together. They always have.

Project Weight Watch has been initiated to assist you. Its scope is nationwide, its purpose is to focus professional attention on the problem.

To help you translate your concern to your patients, a portfolio of materials is available. Send for it.

As adults, we've been battling the bulge for years.

Our kids deserve a better break.

Dairy Council of Greater Metropolitan Washington, D. C.
1511 K Street, N. W.
Washington, D. C. 20005

PROJECT
WEIGHT
WATCH

Over the Desk

A Bridge Across the Sea: To establish a "Communication Bridge" with a similar association in another country has been the wish of the D. C. Tuberculosis Association for quite some time. We felt the exchange of information on voluntary TB control activities, educational material, and information on ways to serve the community might be mutually profitable. This developed into a concept of having a "Sister Association." The Federazione Italiana contro la Tubercolosi in Rome was invited to participate in this exchange of ideas and experiences in order to develop an understanding of what others do and face in regard to the tuberculosis program.

We are happy and proud to announce we not long ago received a letter from Prof. Giovanni L'Eltore, Secretary General, who accepted our proposal in behalf of the Federazione. We hope this new project will be a lasting and fruitful one, and we take this opportunity to salute our Sister Association, the Federazione Italiana contro la Tubercolosi.—Washington, D. C. TB Association Report, February, 1966.

* * *

Many registered nurses are "tired of retirement" and will return to their profession if the program and working conditions are attractive.

A recruitment campaign by the A. Holly Patterson Home for Nassau County (N. Y.) Aged and Infirm was aimed at attracting the nurses who left the field within the last 10 years. The success of the campaign is explained in detail in the November 1 issue of *Hospitals*, Journal of the American Hospital Association.

Part-time schedules on a per diem or hourly rate proved to be an attraction for the nurses; and for those who were raising families the nearby nursery school facilities helped solve the preschool problems.

Naturally, the salary scale had to be made inviting and competitive and it was. The educational workshops proved that the nurses could come back without an extensive retraining period. The result: 110 nurses came out of retirement within a year to fill the professional staff requirements—and 70 per cent were hired on less than a 40-hour-week schedule.

Today, nearly a year later, the 900-bed A. Holly Patterson Home has a larger staff of registered nurses than many averaged-sized hospitals on Long Island.—News Release, October 29, 1965, from American Hospital Association.

* * *

Women in Medical Schools: Women are manifesting an increased interest in medicine by increasing their numbers as both medical school applicants and as medical school graduates. With the growing shortages of medical personnel and the increasing roles in medicine compatible with the accepted roles imposed on women by our culture, even greater numbers of women may in the future consider medicine as a career.

The following table gives some significant figures on the number of women in U. S. Medical schools from 1930 to 1965. The years 1946 to 1950 probably reflected the accelerated program activity of the wartime period. The increased number of women medical school applicants being accepted (from 315 in 1929–30 to 824 in 1964–65) should result in further increases in the number of women medical graduates in the coming years.

Year	Women Students	Percentage of all Students	Women Graduates	Percentage of all Graduates
1930	955	4.4	204	4.5
1935	1,077	4.7	207	4.1
1940	1,145	5.4	253	5.0
1945	1,352	5.6	262	5.1
1950	1,806	7.2	595	10.7
1955	1,537	5.4	345	4.9
1960	1,710	5.7	405	5.5
1965	2,503	7.7	503	7.3

—Datagrams, Association of American Medical Colleges, 1966, 7, No. 8.

* * *

"Purified" Oysters: Scientists in the Public Health Service, U. S. Department of Health, Education and Welfare, have shown that oysters and clams can quickly rid themselves of poliovirus and bacteria when transplanted from polluted water into clean water. This finding suggests that the shellfish may be "purified" before marketing, much as milk is made safer by pasteurization.

Using nonvirulent Type 1 Poliovirus, with *E. coli* as indicator (or control) bacteria, a team of researchers at the Public Health Service's Gulf Coast Shellfish Sanitation Research Center, Dauphin Island, Alabama, found that oysters freed themselves of contaminating viruses and bacteria within 12 to 24 hours of exposure in purified sea water. The shellfish had previously been contaminated deliberately by exposure in tanks of

(*Continued on page 28*)

"All Interns are Alike"

It stands to reason. They all go through the same training; they all have to pass the same tests; they all have to measure up to the same standards; they all are underpaid, too. Therefore, all interns are alike.

That's utter nonsense, of course. But it's no more nonsensical than what some people say about aspirin. Namely: since all aspirin is at least supposed to come up to certain required standards, then all aspirin tablets must be alike.

Bayer's standards are far more demanding. In fact, there are at least *nine specific differences* involving purity, potency and speed of tablet disintegration. These Bayer® standards result in significant product benefits including gentleness to the stomach, and product stability that enables Bayer tablets to *stay* strong and gentle until they are taken.

So next time you hear someone say that all aspirin tablets are alike, you can say, with confidence, that it just isn't so.

You might also say that all interns aren't alike, either.

BAYER
ASPIRIN
FAST PAIN RELIEF
ORANGE FLAVORED
BAYER
ASPIRIN
CHILDREN

Over the Desk

(*Continued from page 26*)

water containing a constant level of the virus and indicator bacteria.—News Release, November 7, 1965, from HEW.

Smith Kline & French Laboratories has arranged with the Nation's principal salvage companies for the return of Smith Kline & French products damaged by fire or other mishap or acquired by salvage companies as a result of bankruptcies.

The company said it adopted the policy so that possibly damaged SK&F products will not be distributed and also to help keep SK&F products from unintentionally getting into unauthorized drug distribution channels.—News Release, October, 18, 1965 from SK&F Laboratories, Philadelphia.

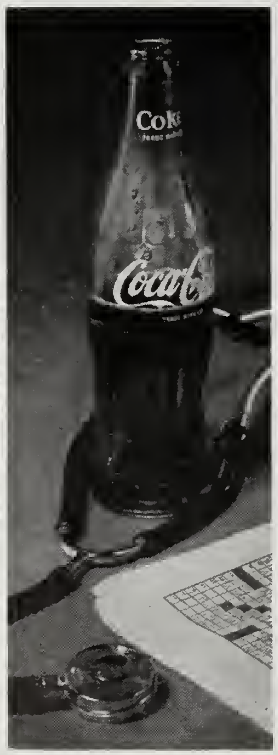
Three-fourths of all drugs, antibiotics and vaccines in hospital use today were unknown 10 years ago.—*Press Information* (American Hospital Association), April 19, 1965.

A Los Angeles physician with a sense of humor may be leading his profession out of the morass of esoteric lecture terminology in which most medical conventions bog down.

Dr. Isaac Sanders, Instructor in Radiology at Loma Linda University School of Medicine, was moderator of a "refresher course" entitled "Practical Radiology for Practically Everybody" for physicians attending the School's 34th Alumni Postgraduate Convention, March 11 to 17, 1966. Among the subjects listed in the program were: "Arthritis No Longer Gets Me Disjointed," "Congenital Heart Disease No Longer Makes Me Blue," "Short-cuts to Oblivion in Chest Diagnosis," "An Upper G.I. Series Ain't No Esophagus Study," and "Every Mediastinal Mass Isn't a Mess."

Turning the needle on physicians themselves, Dr. Ernest J. Braun spoke on "Attending Physicians I Have Known (or Nonpatient Problems in Radiation Therapy)."—News Release, February 4, 1966, from Loma Linda University, Loma Linda, Calif.

11:47 pm

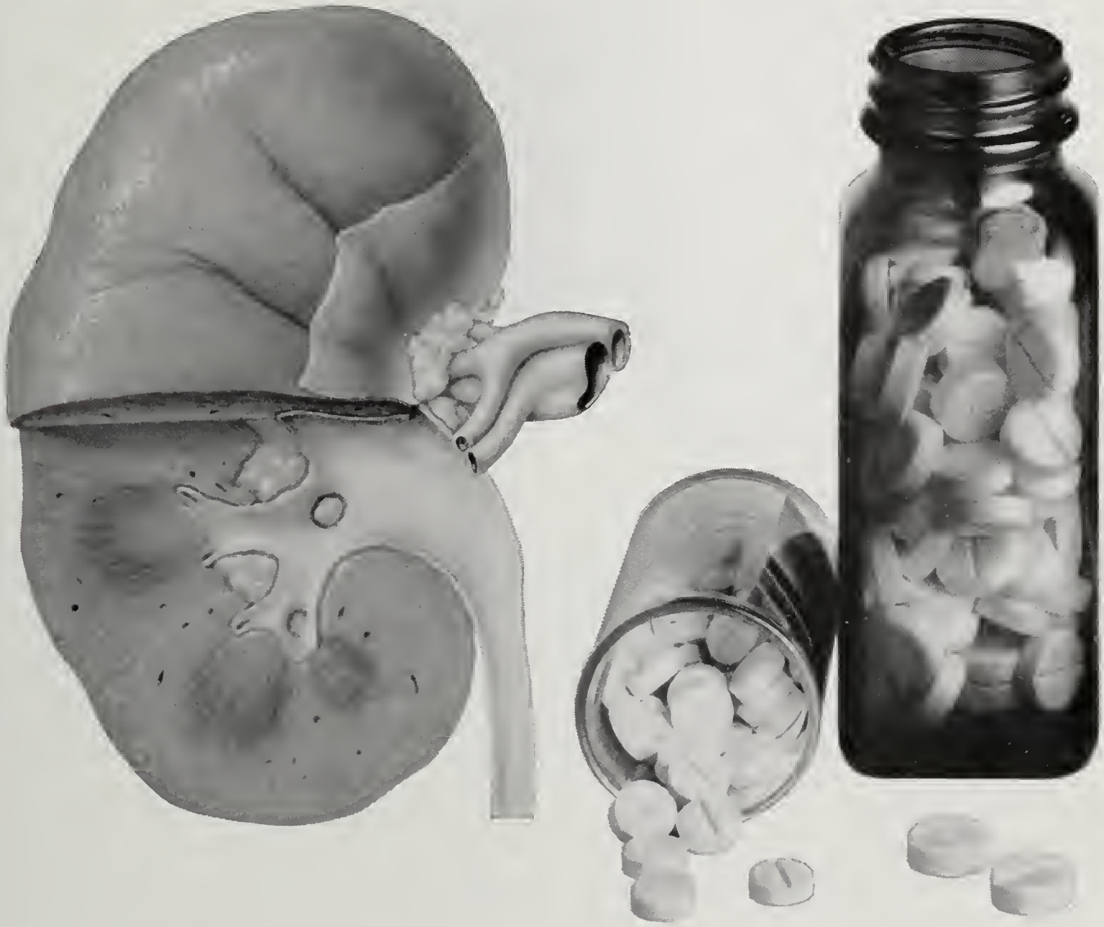

11:53 pm

12:06 am

The meaningful pause. The energy it gives. The bright little lift. Coca-Cola with its never too sweet taste, refreshes best. Helps people meet the stress of the busy hours. This is why we say things go better with Coke

TRADE-MARK ®

at Merck Sharp & Dohme...



understanding... precedes development

The development of chlorothiazide and probenecid were events of major importance, but perhaps even more important for the future was the Renal Research Program by which they were developed. When Merck Sharp & Dohme organized this program in 1943, it was expressing in action some of its basic beliefs about research:

- Many problems connected with renal structure and function were still undefined or unsolved. The Renal Research Program would begin its basic research in some of these problem areas.
- From knowledge thus acquired might come clues to the development of new therapeutic agents of significant value to the physician.

For example, the Renal Research Program put fifteen years into this search before chlorothiazide became available. But because these years had first led to a greater understanding of basic problems, the desired criteria for chlorothiazide existed before the drug was developed.

Along with other research teams at Merck Sharp & Dohme, the Renal Research Program continues to add new understanding of basic problems—understanding which will lead to important new therapeutic agents.

MSD MERCK SHARP & DOHME Division of Merck & Co., Inc., West Point, Pa.

where today's theory is tomorrow's therapy

First aid for a button popper

Second aid for a button popper

30
Lederle
BAMADEX
SEQUELS
Sustained Release Capsules
077-619

By providing combined anorexigenic-tranquilizing action, BAMADEX SEQUELS Capsules help your nonshrinking patients to establish new patterns of eating less. The amphetamine component suppresses the appetite, while the meprobamate helps allay nervousness and tension. And for most patients, the *sustained* release of the active ingredients provides convenient one-capsule-a-day dosage.

Side Effects commonly associated with either component are possible but, to the extent these are dose-related, they should normally be mild and infrequent, since the total dosage of each component on the usual one-capsule-daily regimen is quite low. Also, the sedating effect of meprobamate and the stimulating effect of d-amphetamine sulfate tend, to some extent, to cancel each other out. Adverse effects not peculiar to either component have not been reported. Side effects associated with d-amphetamine sulfate include: insomnia, excitability, increased motor activity, confusion, anxiety, aggressiveness, increased libido, hallucinations, rebound fatigue, depression, dry mouth, anorexia, nausea, vomiting, diarrhea and increased cardiovascular reactivity. Effects associated with meprobamate include: skin rash, nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema, fever and transient leukopenia; also, very rarely, fainting spells, angioneurotic edema, bronchial spasm, hypotensive crisis, anuria, stomatitis, proctitis and anaphylaxis. Other serious effects have occurred after concomitant administration of meprobamate and other drugs. Massive overdosage may produce grave effects.

Precautions: BAMADEX SEQUELS should be given only under close supervision to patients hypersensitive to sympathomimetic drugs, with cardiovascular or coronary disease or who are severely hypertensive; to emotionally unstable persons and to epileptics. Patients should be cautioned not to drink alcoholic beverages while on the drug, and not to drive vehicles if they become drowsy. In all patients kept on the drug for long periods, the drug should be withdrawn gradually to avoid possible serious reactions.

Contraindications: Hyperexcitability, agitated prepsychotic states and a history of previous reactions to meprobamate.

Bamadex® Sequels®

d-amphetamine sulfate (15 mg.) Sustained Release Capsules
and meprobamate (300 mg.)

LEDERLE LABORATORIES • A Division of American Cyanamid Company, Pearl River, New York Lederle

6655

NATIONAL AND REGIONAL MEETINGS

April 25–29: American College of Allergists. Palmer House, Chicago. Address: Dr. William B. Steen, *Secretary*, 116 North Tucson Blvd., Tucson, Ariz.

April 26–30: American Academy of Neurology. Bellevue-Stratford Hotel, Philadelphia. Address: Mr. Thomas D. Swedien, *Executive Secretary*, 7100 France Avenue South, Minneapolis, Minn. 55410.

April 27–28: Medical and Chirurgical Faculty of the State of Maryland. The Alcazar, Baltimore. Address: Mr. John Sargeant, *Executive Secretary*, 1211 Cathedral Street, Baltimore, Md. 21201.

April 27–30: American Association of Plastic Surgeons. Sheraton-Cleveland Hotel, Cleveland. Address: Dr. Robert M. McCormack, 260 Crittenden Blvd., Rochester, N. Y. 14620.

May 2–5: American College of Obstetricians and Gynecologists. Palmer House, Chicago. Address: Dr. Craig W. Muckle, *Secretary*, 8016 Seminole Avenue, Philadelphia, Pa. 19118.

May 9–13: American Psychiatric Association. Shelburne Hotel, Atlantic City, N. J. Address: Dr. Robert S. Garber, *Secretary*, The Carrier Clinic, Belle Mead, N. J. 08502.

May 12–15: Virginia Academy of General Practice. Hotel Roanoke, Roanoke, Va. Address: Mrs. Louise B. Greiner, *Executive Secretary*, 4205 Dover Road, Richmond, Va. 23221.

May 21–22: AMPAC National Workshop. Sheraton-Park Hotel, Washington.

May 26–28: American Gastroenterological Association. Drake Hotel, Chicago. Address: Dr. David Cayer, *Secretary*, 2240 Cloverdale Avenue, Winston-Salem, N. C.

May 30–June 1: American Ophthalmological Society. The Greenbrier, White Sulphur Springs, W. Va. Address: Dr. Samuel D. McPherson, Jr., *Executive Secretary*, 1110 West Main Street, Durham, N. C.

May 30–June 2: American Urological Association. Palmer House, Chicago. Address: Mr. William P. Didusch, *Executive Secretary*, 1120 North Charles Street, Baltimore, Md. 21201.

June 25: American Association for the Study of Headache. Conrad Hilton Hotel, Chicago. Address: Dr. Seymour Diamond, *Secretary*, 5214 North Western Avenue, Chicago, Ill. 60625.

Surgical Supplies and Equipment

Complete Fitting Service for
Ladies and Men

NELSON KLOMAN SURGICAL SUPPLY CO.
1018 - 18th Street, N.W.
Washington 36, D. C.

***Telephone*: FEderal 8-5245**

VISIT THESE
CONVENIENT RESIDENTIAL
COMMUNITIES FOR EXECUTIVES
AND PROFESSIONALS

built and sold by Gruver & Cooley
area builders for over 50 years

in Maryland:

Walnut Woods . . . take 70-S to Montrose Rd., right one block to Hitching Post Lane, right to Old Stage Rd., then right on Old Stage. Priced from $45,000.

Luxmanor . . . Take Old Georgetown Rd. north from 70-S for two blocks to New Lux Lane, turn left and follow the Luxmanor sign to Stephalee Lane. Priced from $58,000.

in Virginia:

Greenway Heights . . . from Beltway Exit 13 take Route 193 West for 2 miles to entrance on left, across from Madeira School. Priced from $52,000.

all open daily until dark

Gruver & Cooley
BUILDERS

5301 Wisconsin Ave., N.W. KE 7-1120
evenings and weekends call Mr. Stoner, EM 5-0867

Physicians—

ATTENTION!

Now ready for occupancy

BOULEVARD MEDICAL CENTER

8301 Arlington Blvd. (Rte. 50)

—Just west of Gallows Road

—Just west of Rte. 495

—Adjacent to Fairfax Hospital

In the heart of Northern Virginia's "hottest" growth area!

Leasing information:

Mr. Appel, 527-6660

Pomponio Properties, Inc.

rochlorothi
Paregoric
Nitroglycerin
Belladonna
Codeine
Aspirin
Digitalis
Cortisone
Vitamins
Penicillin
Miltown®

An eminent role in medical practice

- Clinicians throughout the world consider meprobamate a therapeutic standard in the management of anxiety and tension.
- The high safety-efficacy ratio of 'Miltown' has been demonstrated by more than a decade of clinical use.

Miltown®
(meprobamate)

Indications: 'Miltown' (meprobamate) is effective in relief of anxiety and tension states. Also as adjunctive therapy when anxiety may be a causative or otherwise disturbing factor. Although not a hypnotic, 'Miltown' fosters normal sleep through both its anti-anxiety and muscle-relaxant properties.

Contraindications: Previous allergic or idiosyncratic reactions to meprobamate or meprobamate-containing drugs.

Precautions: Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of pre-existing symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side effects: Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

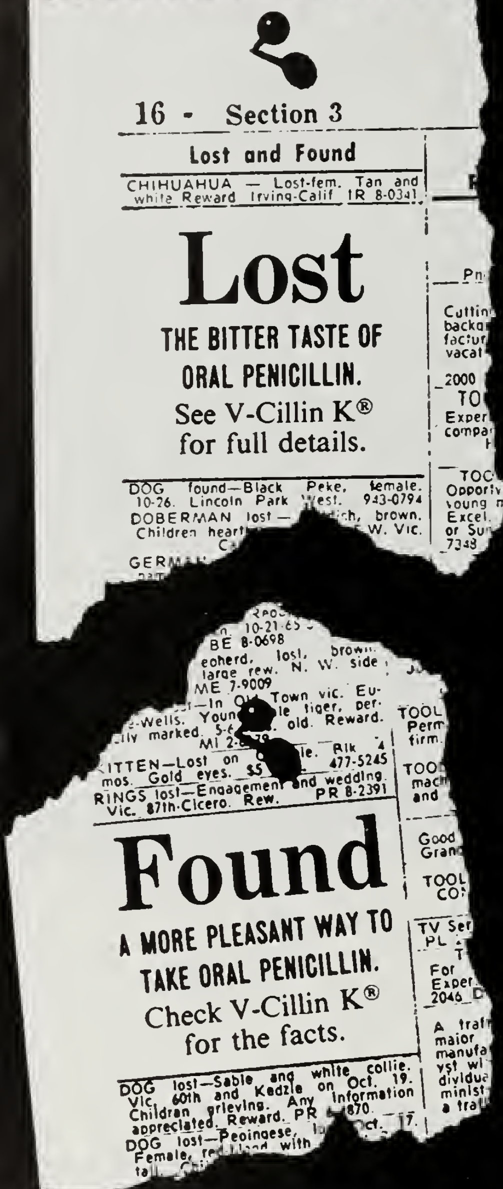
Usual adult dosage: One or two 400 mg. tablets three times daily. Doses above 2400 mg. daily are not recommended.

Supplied: In two strengths: 400 mg. scored tablets and 200 mg. coated tablets.

Before prescribing, consult package circular.

WALLACE LABORATORIES
Cranbury, N.J.

CM-5761



16 - Section 3

Lost and Found

CHIHUAHUA — Lost-fem. Tan and white Reward Irving-Calif IR 8-0341

Lost

THE BITTER TASTE OF ORAL PENICILLIN.

See V-Cillin K® for full details.

Found

A MORE PLEASANT WAY TO TAKE ORAL PENICILLIN.

Check V-Cillin K® for the facts.

Patients won't complain about bitter penicillin taste when you specify V-Cillin K. Here's why: It has a special coating, only one and a half *thousandths* of an inch thick. Because it is designed to dissolve after approximately six seconds, this barrier to bitterness remains on the tablet as it slides past the tongue. When the tablet reaches the stomach, however, the coating has dissolved, and the penicillin is ready for immediate absorption into the bloodstream.

Result? The proved efficacy of potassium penicillin V without the penalty of bitter taste.

Indications: V-Cillin K is an antibiotic useful in the treatment of streptococcus, pneumococcus, and gonococcus infections and infections caused by sensitive strains of staphylococci.

Contraindications and Precautions: Although sensitivity reactions are much less common after oral than after parenteral administration, V-Cillin K should not be administered to patients with a history of allergy to penicillin. As with any antibiotic, observation for overgrowth of nonsusceptible organisms during treatment is important.

Usual Dosage Range: 125 mg. (200,000 units) three times a day to 250 mg. every four hours.

Supplied: Tablets V-Cillin K, 125 or 250 mg., and V-Cillin K, Pediatric, 125 mg. per 5-cc. teaspoonful, in 40, 80, and 150-cc.-size packages.

Lilly

V-Cillin K®

Potassium Phenoxymethyl Penicillin

Additional information
available to physicians
upon request.
Eli Lilly and Company,
Indianapolis, Indiana.
600050

MEDICAL ANNALS
of the District of Columbia

April 1966
VOLUME XXXV • NUMBER 4

Walter Reed Army Medical Center Number

THIS IS THE FOURTH of a fourth series of special numbers of the MEDICAL ANNALS, the scientific material for which is supplied by medical institutions and scientific organizations in the Washington Metropolitan Area. For the WALTER REED ARMY MEDICAL CENTER NUMBER the Editorial Board is indebted to Colonel Loren F. Parmley, MC, USA, Consulting Editor of the MEDICAL ANNALS, who secured the papers which appear in this issue.

Peritoneal Dialysis: An Appraisal of Its Value in Acute Renal Failure*

CAPTAIN FRANKLIN D. SCHWARTZ, MC, USAR†; MAJOR THOMAS E. DAVIS, MC, USA‡; LT. COLONEL JACQUES L. SHERMAN, JR., MC., USA§; AND LT. COLONEL KEVIN G. BARRY, MC, USA‖

ARTIFICIAL DIALYSIS for treatment of renal failure was first proposed by Abel[1] in 1913. The next decade was devoted to search for a dialyzing membrane and anticoagulants suitable for use in an extracorporeal circuit.[2-5] These technical problems associated with hemodialysis were circumvented by Ganter[6] (1923), who employed peritoneal irrigation for the treatment of uremic patients. However, early trials of continuous peritoneal lavage were complicated by a high incidence of peritonitis and technical difficulties.[7, 8] Interest in artificial dialysis was stimulated when Kolff[9] in 1944 introduced the first practical apparatus for extracorporeal dialysis. Development of the disposable twin-coil dialyzer[10] and other technical improvements led to general acceptance of hemodialysis as a valuable adjunct to the management of renal failure.

A resurgence of clinical interest in peritoneal dialysis occurred following the successful modifications introduced by Grollman,[11] Maxwell,[12] and Doolan.[13]

The incidence and lethal nature of post-traumatic renal failure in World War II[14] led to an expansion of Army Medical Service programs for the study of a dialysis center at Walter Reed General Hospital. The rotating drum hemodialyzer was initially employed here and received extensive use during the Korean War.[15, 16] The renal failure team in Korea contributed to a better understanding of post-traumatic renal failure and, through a more sophisticated approach to medical management and use of hemodialysis, was able to reduce the mortality rate from over 90 per cent in World War II to 68 per cent during the Korean conflict.[15, 16]

At Walter Reed General Hospital the rotating drum was superseded by the twin-coil dialyzer. Despite the increased safety of the latter, hemodialysis remained hazardous in the presence of circulatory instability and hemorrhagic diathesis. For this reason an adjunctive program of peritoneal dialysis was begun in 1960. Initially reserved for the "poor-risk" patient, gratifying results led to its employment as the preferential method for routine use. At present, for treatment of renal failure, hemodialysis is reserved for patients in whom the peritoneal route is not practical. This occurs most frequently in the presence of extensive intra-abdominal trauma when adequate infusion and drainage are technically impossible. Hemodialysis remains the treatment of choice for acute intoxications with dialyzable poisons when rapid extraction is desirable. However, modifications of dialysis solutions and techniques already under investigation[17-21] should improve the efficiency of peritoneal dialysis to the point where extraction rates for specific toxins are comparable to those of hemodialysis.

---

* From the Department of Metabolism, Division of Medicine, Walter Reed Army Institute of Research, Washington, D. C.

† Present address: Presbyterian-St. Luke's Hospital, Chicago, Illinois.

‡ Present address: Research and Development Command, Office of the Surgeon General, Washington, D. C.

§ Present address: Maimonides Hospital, Brooklyn, New York.

‖ For reprints address: Lt. Colonel Kevin G. Barry, MC, USA, Chief, Department of Metabolism, Walter Reed Army Institute of Research, Washington, D. C. 20012.

The total experience at Walter Reed General Hospital with peritoneal dialysis includes to date over 200 dialyses in 130 patients. This paper will be limited to the results in the treatment of acute renal failure.

Peritoneal dialysis was employed in the management of acute renal failure in 56 patients seen at Walter Reed General Hospital from January 1960 through December 1963 (table 1). Dialysis was instituted on 74 occasions; 14 patients required repeated procedures. Etiologic categories and survival data are summarized in table 2.

TABLE 1: Peritoneal Dialysis (W.R.G.H.) 1960–1963

CATEGORY	NO. PATIENTS	NO. DIALYSES
Acute renal failure	56	74
Chronic renal failure	30	60
Hepatorenal syndrome	7	9
Intoxication	5	6
Miscellaneous	3	3
TOTAL	101	152

TABLE 2: Etiologic Disease and Cause of Death

ETIOLOGY	NO. PATIENTS	SURVIVED	CAUSES OF DEATH			
			Basic Disease	Septicemia	CVA	Cardiac
Post-traumatic	9	1	4	4	—	—
Postoperative	16	5	6	3	—	2
Postinfectious	6	1	3	1	1	—
Obstetric complications	3	1	—	2	—	—
Heat stroke	3	0	3	—	—	—
Nephrotoxic agent	8	6	2	—	—	—
Exacerbation of chronic disease	8	5	2	—	—	1
Collagen disease	3	0	1	—	2	—
TOTALS	56	19	21	10	3	3

Approach to the Patient

Acute renal failure may be defined as an acute reduction in renal excretory function occurring in a clinical setting known to precipitate the condition. Clinically this is manifested by decreased urine flow (less than 15 ml./hr.) of low specific gravity accompanied by progressive distortion of normal chemical homeostasis.

Prior to application of the restrictive renal failure regimen an attempt is made to restore adequate renal function (regardless of duration of oliguria) by infusion of a test dose of hypertonic mannitol. The effectiveness of mannitol in establishing and maintaining a diuresis has been demonstrated in many patients presumed to be in irreversible renal failure.[22, 23] Adequate resuscitation (i.e., support of blood pressure, transfusion, assurance of an adequate airway, etc.) is established and maintained, and specific treatment is directed toward the precipitating process.

Ureteral obstruction must also be excluded by catheterization and visualization of 1 collecting system.

Every effort is made to establish an etiologic diagnosis to guide proper medical management and to determine prognosis. Renal biopsy is obtained at a time when the patient's condition is stabilized, frequently after the initial dialysis.

Principles of Management

Formerly overhydration, potassium intoxication, and uremia ranked as the leading causes of death in acute renal failure. These have been largely circumvented by means of careful fluid restriction, administration of effective cationic exchange resins, and early dialysis. At present infection, hemorrhage, and complications of the underlying disease are the major causes of death.

Overhydration is prevented by limiting fluid intake to 500 ml. per day* plus visible output. The patient is weighed daily and when fluid restriction is enforced will lose 0.5 to 1.0 lb. per day due to catabolism of body tissue. Fluids are administered orally and are supplemented by a high caloric, low-protein diet, if tolerated. If oral alimentation is not possible, 500 ml. of 20 per cent glucose in water is administered daily to supply adequate carbohydrate for protein sparing.[24] During peritoneal dialysis the glucose of the dialysate meets the caloric requirements.

The polystyrene exchange resins, administered either orally or rectally, are usually effective in controlling hyperkalemia and also tend to minimize acidosis.[25] The need for adequate débridement of wounds and devitalized tissues is well established.

---

* Although average insensible losses amount to 800 to 900 ml. daily, water of oxidation and cell water released during starvation may total 300 to 400 ml.

Digitalis,[26] antibiotics[27, 28] and other drugs are administered cautiously in accordance with our present knowledge of effective blood levels and impaired elimination in renal failure.

Special attention is given to supportive and nursing care, particularly in the critically ill patient. When practical, ambulation is encouraged.

Indications for dialysis. In the majority of cases dialysis was instituted for relief of signs and symptoms of impending uremia. In some, other factors, i.e., acidosis, hyperkalemia, etc., were present.

Teschan[29] and others have presented evidence that early hemodialysis may prevent many complications and actually increase survival in acute renal failure. The same philosophy may be applied to peritoneal dialysis. We have accepted the following laboratory findings as definite indications for dialysis:

Blood urea nitrogen $>$ 200 mg. per cent
Serum creatinine $>$ 20 mg. per cent
Serum potassium $>$ 6.0 mEq./L despite resin therapy
Serum CO_2 combining power $<$ 15 mEq./L
Significant overhydration with hyponatremia

In addition, it is difficult to assess various clinical findings as indicative of impending deterioration. Once deterioration begins, the course is frequently fulminating. At times mental obtundation, neuromuscular irritability, anorexia and vomiting may become manifest prior to severe biochemical abnormalities and can be controlled by early dialysis.

There is a strong tendency to blame uremia for any clinical deterioration of the patient with acute renal failure. Meroney[16] emphasized that clinical uremia is rarely observed before the fifth day of oliguria. This is particularly important in the post-traumatic patient, in whom search should be made for other pathologic processes such as muscle necrosis, shock, or generalized sepsis which may be responsible. Dialysis is of little or no benefit without thorough evaluation of and attention to the patient's overall condition.

Technique of dialysis. Our procedure for dialysis has been described in detail.[17] In general, 2,000 ml. of commercial dialysis solution is introduced into the peritoneal cavity, allowed to equilibrate for 45 minutes, and then drained by gravity for 15 minutes. Thus, 2 liters are exchanged hourly; the total duration usually ranges from 24 to 36 hours, depending on clinical response.

Initially the peritoneal catheter was introduced through a no. 17 trocar at paracentesis and removed at the termination of dialysis. For the past 3 years we have utilized routinely an indwelling peritoneal cannula[30, 31, 32] for all procedures. This device, inserted through a no. 28 trocar, accommodates the peritoneal catheter and is allowed to remain in place following dialysis. The indwelling cannula does not interfere with ambulation between dialyses. Repeated dialysis may be instituted by reinsertion of the catheter through the indwelling device, thus eliminating the need for repeated paracentesis. In addition, achievement of a secure skin-to-peritoneum seal reduces many local complications frequently associated with use of the peritoneal catheter alone. The incidence of skin irritation, local bleeding, and subcutaneous fluid dissection has decreased since the introduction of this device.

Several common pitfalls and difficulties in dialysis technique are reviewed elsewhere.[17]

Results

Kinetics of peritoneal dialysis. The relationships between dialyzed volumes and rates of urea extraction are depicted in figure 1. Hourly exchange of 2 to 3 liters achieves maximum efficiency of dialysis: The rate of equilibrium of urea concentration from blood to dialysate and the rate of peritoneal clearance of urea are minimally affected by larger exchange volumes. For routine clinical use exchange of 2 liters per hour combines simplicity with effectiveness.

Data on peritoneal clearances, equilibration ratios, and urea nitrogen extraction are presented in table 3. The average clearance* of urea for 15 dialyses was 22.5 ml./min., while the average urea bath/blood was 0.66. Total urea nitrogen removed per 24 hours varied from 11 to 32 Gm., with a mean of 20 Gm.

Since peritoneal clearance remains constant throughout dialysis, the rate of urea extraction decreases with fall in blood urea nitrogen (figure 2). Thus, rate of urea extraction per hour and cumulative urea removed depend on initial level of BUN. Boen[33] analyzed the relationships between dialyzed volumes and rates of extraction

---

* Peritoneal clearance of urea

$$= \frac{\text{bath conc. urea}}{\text{blood conc. urea}} \times \text{volume dialyzed/min.}$$

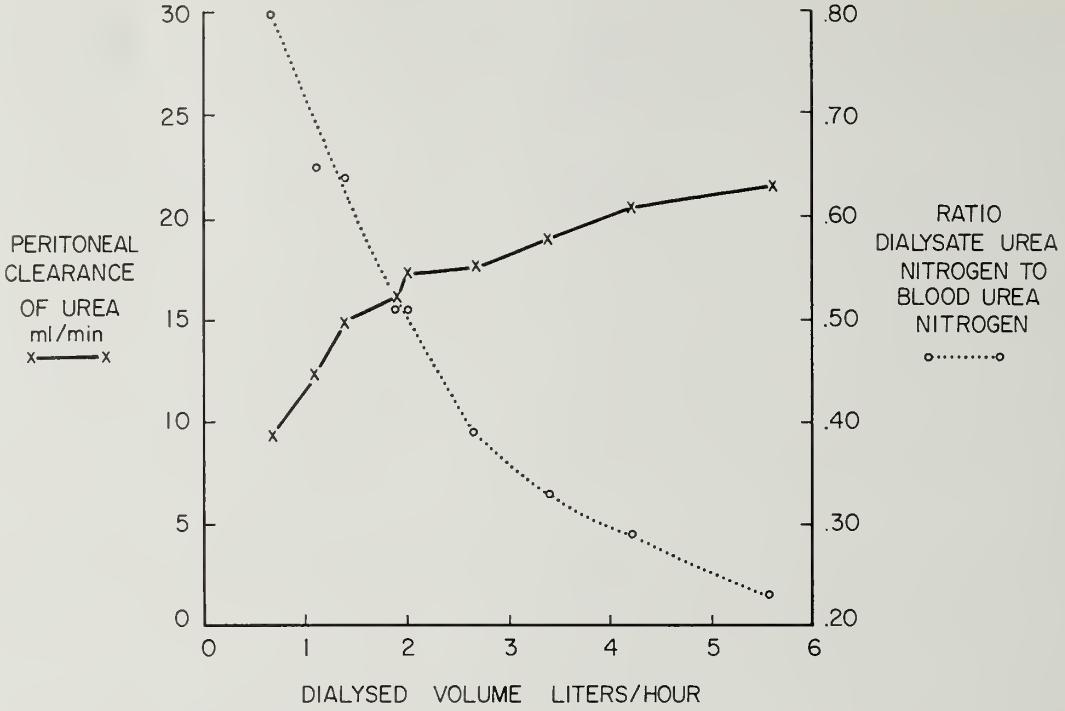


FIG. 1. Peritoneal clearance of urea and ratio of dialysate to blood urea depicted for a representative patient at various rates of dialysis exchange. Volume of dialysate exchanged was varied from 500–5,500 ml. per hour. For practical clinical use 2,000 ml./hr. combines efficiency and economy.

of urea and other substances. He also concluded that maximum efficiency is gained by exchanging 2 to 3 liters hourly.

Clinical and biochemical effectiveness. The effects of dialysis on various biochemical abnormalities of acute renal failure are illustrated graphically in figure 3.

Peritoneal dialysis effectively controls the clinical features and biochemical abnormalities of uremia. One possible exception is the hypercatabolic patient in whom urea formation is very rapid. Such patients ordinarily require frequent repeated hemodialyses to control symptoms. We have employed a combination of peritoneal and

TABLE 3: Kinetics of Peritoneal Dialysis

Patient	Hours of Dialysis	Initial BUN	Final BUN	Urea Nitrogen Avg. (Bath/Blood) Ratio	Avg.* C Urea (ml./min.)	Total Urea N Extracted (Gm.)	Extraction Urea N/hr. (Gm.)
S. Ste	198	118	57	0.72	24.5	148.7	0.75
S. Ste	44	170	74	0.76	25.8	59.4	1.35
S. Ste	44	130	68	0.81	27.5	40.2	0.91
S. Ste	22	132	108	0.49	16.7	22.0	1.00
E. Ban	44	160	85	0.49	16.7	47.6	1.08
C. Bla	38	93	95	0.65	22.1	31.9	0.84
J. Bld	18	143	130	0.42	14.3	15.7	0.87
E. Haa	37	155	97	0.61	20.7	44.2	1.19
P. Hof	85	118	49	0.65	22.1	52.4	0.62
P. Hof	46	106	47	0.58	19.7	32.0	0.69
C. Sne	50	90	56	0.61	20.7	35.5	0.71
W. Smi	67	119	65	0.70	23.8	31.0	0.46
J. Ayr	44	135	49	0.66	22.4	40.0	0.91
C. Ray	116	60	70	0.81	27.5	67.2	0.58
C. Ray	46	150	92	0.98	33.3	52.6	1.14
Average	60	119	76	0.66	22.5	48.0	0.87

$$^{*}\,{}^{\mathrm{C}}\,\text{Urea} = \text{Peritoneal clearance of urea} \pm \frac{\text{Bath conc. urea}}{\text{Blood conc. urea}} \times \text{volume fluid exchanged/min.}$$

hemodialysis in such patients. Following initial control of azotemia and uremia by hemodialysis, prolonged or intermittent peritoneal dialysis will maintain control. (One patient [F. Bia] underwent continuous dialysis for a period of 206 hours; another [L. Dod], for 192 hours.)

Acidosis is usually readily reversible. In severe states of metabolic acidosis, such as lactic acidemia, methanol intoxication and heat stroke, additional alkali can be administered intravenously and/or intraperitoneally during dialysis without fear of circulatory overload.

Reversion of ECG abnormalities toward normal have been observed within minutes of institution of dialysis. These immediate changes are probably due to intracellular movement of potassium associated with correction of acidosis and rapid absorption of glucose. In nondigitalized patients, potassium-free dialysis solution can be safely utilized for long periods with ECG monitoring. By this means, 300 to 400 mEq. of potassium can be extracted in 30 to 36 hours. Digitalized patients require careful titration of potassium to avoid intoxication during correction of hyperkalemia.

Dialysis for fluid retention. Ultrafiltration is enhanced by employing the 7.0 per cent glucose solution. The ease and effectiveness of peritoneal

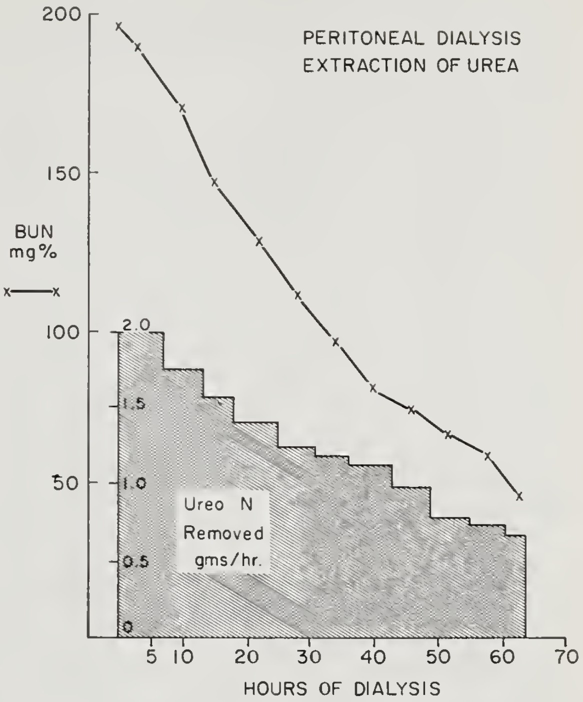


FIG. 2. Rate of urea nitrogen extracted plotted with level of blood urea nitrogen over 64 hours of dialysis in a representative patient. Rate of urea extraction varies directly with BUN.

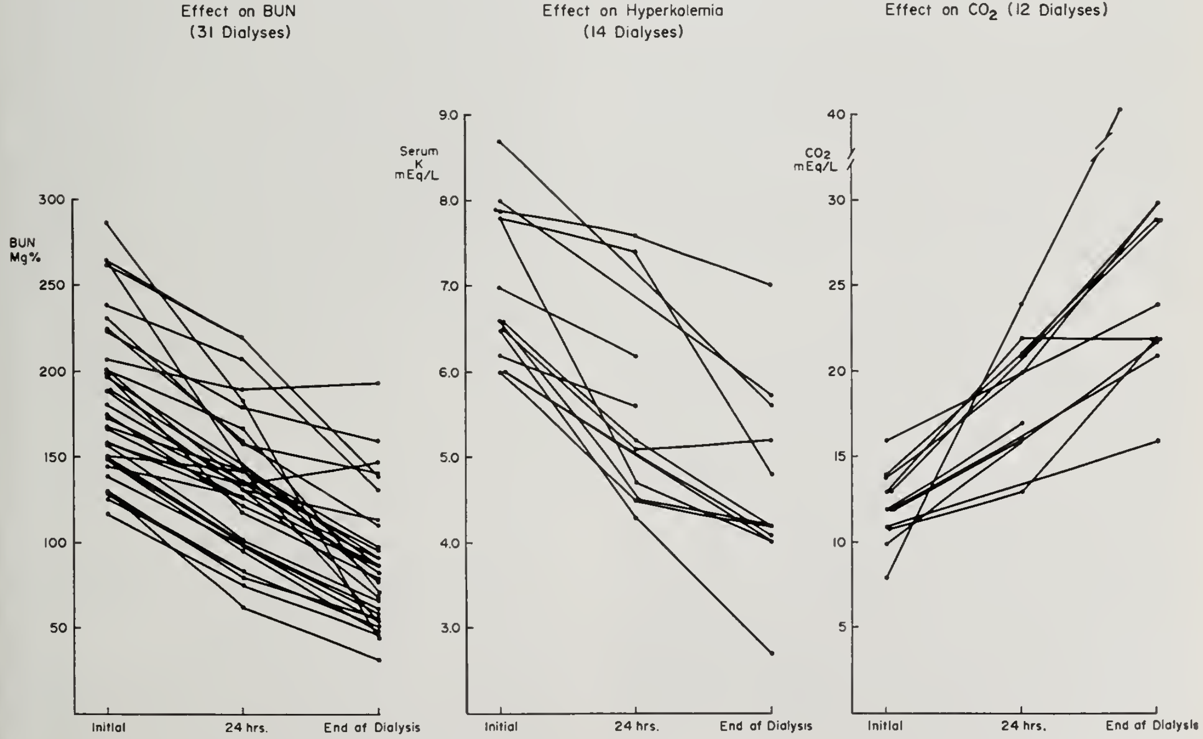


FIG. 3. Peritoneal dialysis is an effective means of reversing the biochemical abnormalities of uremia. Rarely BUN rise may be difficult to control (see text).

dialysis in correcting overhydration and electrolyte imbalance in uremia have led to its application in a variety of clinical states manifested by refractory fluid retention.

Prognosis. The prognosis, as with hemodialysis, was determined primarily by the severity of the underlying disease and the occurrence of sepsis. In general, patients suffering extensive trauma or infection ultimately succumbed, despite prevention of uremia and maintenance of fluid and electrolyte balance. In some cases renal failure may have been contributory, but in no instance was death directly attributable to clinical uremia. When the basic disease responded to therapy and severe infection did not supervene, homeostasis was maintained until return of adequate renal function.

Complications of peritoneal dialysis (table 4).

TABLE 4: Complications of Peritoneal Dialysis

Total number of dialyses		74
Uncomplicated	59	
Peritonitis	6	
(Survival: 2)		
Mechanical problems*	9	
(Procedure abandoned: 2)		

* Difficulties with leakage of fluid or drainage.

Overall complications of peritoneal dialysis have been reported.[17] In the majority of cases the dialsis procedure was uneventful. Peritonitis developed in 6 patients and was contributory to death in 2. Dialysis was continued in all, and the infection responded to appropriate antibiotic therapy in 4 patients. Significant leakage of dialysis fluid and/or inadequate drainage occurred in 9 cases, usually associated with recent surgical procedures or extensive abdominal trauma. Dialysis was usually successful despite these complications.

Discussion

Prior to the advent of hemodialysis, in 1944 the mortality rate in post-traumatic renal failure exceeded 90 per cent.[14] The application of more sophisticated medical management and artificial dialysis was instrumental in reducing that figure to 68 per cent during the Korean War.[15, 16] Despite improvements in equipment and techniques there has been no further reduction in mortality. Our survival data with peritoneal dialysis is comparable to that reported by centers employing hemodialysis routinely. Complications of the underlying disease and infection have replaced uremia as the leading cause of death.

Precipitation of renal failure following trauma is a catastrophic event. Once renal failure, with its coincident accelerated catabolic state, is established the prognosis is grave. There are anticipated events known to cause acute depression of renal function for which prophylactic renoprotective measures can be instituted. The expected depression of renal function during anesthesia and surgery can be minimized by preoperative hydration and maintenance of osmotic diuresis.[34-38] In addition, acute renal failure may be functional and reversible in its early stages prior to supervention of organic and irreversible parenchymal damage. There is expanding clinical and experimental evidence that osmotic diuresis may increase renal perfusion and improve renal hemodynamics in the presence of acute circulatory insufficiency.[22, 23]

Interest in peritoneal dialysis was revised by modifications in techniques and successful clinical trials reported 5 years ago by Maxwell,[12] Doolan,[13] and Boen.[33] Since 1959 a number of dialysis centers have employed this technique as an adjunct to or substitute for hemodialysis. Peritoneal dialysis possesses certain theoretical and practical advantages. In our clinical experience this is a comparatively simple and effective means of preventing and reversing the uremic syndrome.

A comment on therapy of acute renal failure superimposed upon chronic renal disease is pertinent to this discussion. In most cases the acute reduction in renal function is secondary to an upper respiratory or gastrointestinal infection and subsequent dehydration. Fluid and electrolyte administration frequently restores adequate renal function. However, many of these patients have reduced myocardial reserve, and the possibility of fluid overloading is always present. Availability of peritoneal dialysis allows the physician to be more vigorous in fluid and electrolyte administration. If restoration of adequate renal function by this means is unsuccessful, dialysis may be instituted. The gradual correction of dehydration and restoration of normal serum chemical composition are frequently followed by return of renal function to preëxisting levels.

The effectiveness of peritoneal dialysis for the treatment of acute renal failure has encouraged its use for other conditions characterized by homeostatic imbalance (table 5).

The list of clinical settings in which peritoneal dialysis can be applicable and beneficial should continue to grow with increasing experience.

TABLE 5: Peritoneal Dialysis: Clinical Applications*

I. Acute renal failure
  A. Acute tubular necrosis
  B. Acute glomerulonephritis
  C. Nephrotoxic agents
II. Chronic renal failure
  A. Exacerbation of chronic renal disease
  B. Chronic dialysis programs
  C. Dialysis program in preparation for transplant
III. Exogenous intoxications (ethylene glycol, barbiturates, etc.)
IV. Endogenous intoxications (hyperuricemia, hepatic coma, etc.)
V. Fluid and acid base imbalance (refractory fluid retention, metabolic acidosis, etc.)

* Adapted from Barry and Schwartz.[17]

References

1. Abel, J. J., Rountree, L. G., and Turner, B. B.: J. Pharmacol. Exp. Ther., 1913, **5**, 275.
2. Love, G. R.: Med. Rec. Ann. (Houston), 1920, **98**, 649.
3. Heyde, H. C., and Morse, W.: J. Lab. Clin. Med., 1921, **6**, 520.
4. Lim, R. K. S., and Necheles, H.: Proc. Soc. Exp. Biol. Med., 1926, **24**, 197.
5. Thalhimer, W.: Ibid., 1938, **37**, 641.
6. Ganter, G.: Muenchen. Med. Wschr., 1923, **70**, 1478.
7. Frank, H. A., Seligman, A. M., and Fine, J.: Ann. Surg., 1948, **128**, 561.
8. Derot, M., Tanret, P., Roussillon, J., and Bernier, J. J.: J. Urol. (Paris), 1949, **55**, 113.
9. Kolff, W. J., and Berk, H. T. J.: Acta Med. Scand., 1944, **117**, 121.
10. Vertes, V., Aoyama, S., and Kolff, W. J.: Trans. Amer. Soc. Artif. Intern. Organs, 1956, **2**, 119.
11. Grollman, A., Turner, L. B., and McLean, J. A.: Arch. Int. Med. (Chicago), 1951, **87**, 379.
12. Maxwell, M. H., Rockney, R. E., Kleeman, C. R., and Twiss, M. R.: J.A.M.A., 1959, **170**, 917.
13. Doolan, P. D., and others: Amer. J. Med., 1959, **26**, 831.
14. Lucke, B.: Milit. Surg., 1946, **99**, 371.
15. Smith, L. H., and others: Amer. J. Med., 1955, **18**, 187.
16. Meroney, W. H., and Herndon, R. F.: J.A.M.A., 1954, **155**, 877.
17. Barry, K. G., and Schwartz, F. D.: Pediat. Clin. N. Amer., 1964, **11**, 593.
18. Etteldorf, J. N., and others: J. Pediat., 1961, **58**, 226.
19. Grollman, A. P., and Odell, G. B.: New Eng. J. Med., 1962, **267**, 279.
20. Knochel, J. P., Clayton, L. E., Smith, W. L., and Barry, K. G.: Clin. Res., 1963, **11**, 246.
21. Berman, L. B., and Vogelsang, P.: New Eng. J. Med., 1964, **270**, 77.
22. Barry, K. G., and Malloy, J. P.: J.A.M.A., 1962, **179**, 510.
23. Barry, K. G.: Milit. Med., 1963, **128**, 224.
24. Gamble, J. L.: Harvey Lect., 1947, **42**, 247.
25. Elkinton, J. R., and others: Amer. J. Med. Sci., 1950, **220**, 547.
26. Doherty, J. E., and Perkins, W. H.: Clin. Res., 1963, **11**, 48.
27. Kunin, C. M., and Rees, S.: J. Clin. Invest., 1958, **37**, 908.
28. Kunin, C. M., and Finland, M.: Arch. Intern. Med. (Chicago), 1959, **104**, 1030.
29. O'Brien, T. F., Baxter, C. R., and Teschan, P. E.: Trans. Amer. Soc. Artif. Intern. Organs, 1959, **5**, 77.
30. Barry, K. G., Shambaugh, G. E., and Goler, D.: J. Urol., 1963, **90**, 125.
31. Barry, K. G., Shambaugh, G. E., Goler, D., and Matthews, F. E.: Trans. Amer. Soc. Artif. Intern. Organs, 1963, **9**, 105.
32. Barry, K. G., Schwartz, F. D., and Matthews, F. E.: Ibid., 1964, **10**, 400.
33. Boen, S. T.: Medicine (Baltimore), 1961, **40**, 243.
34. Barry, K. G., and others: New Eng. J. Med., 1961, **264**, 967.
35. Mazze, R. I., Schwartz, F. D., Slocum, H. C., and Barry, K. G.: Anesthesiology, 1963, **24**, 279.
36. Seitzman, D. M., Mazze, R. I., Schwartz, F. D., and Barry, K. G.: J. Urol., 1963, **90**, 139.
37. Barry, K. G., Mazze, R. I., and Schwartz, F. D.: New Eng. J. Med., 1964, **270**, 1371.
38. Schwartz, F. D., and others: Sustained hydration during anesthesia and surgery: a comparison of glucose and mannitol solutions, in preparation.

Increase in AMA-ERF Loan Interest

The Federal Reserve Board's action to raise the bank discount rate several months ago has been followed by a change in the "prime interest rate." The prime rate, that which lending banks apply to large, short-term, well secured loans, has now increased from 4½ to 5 per cent.

The agreement between the American Medical Association Education and Research Foundation and the banks participating in its Loan Guarantee Program stipulates that the interim interest rate shall be 1 percentage point greater than the prime rate. The agreement further specifies that a change in interest rates, if required, shall become effective on April 1 of any given year.

Consequently, beginning April 1, 1966, the interim and payout rates for all new AMA-ERF loans will become 6 per cent and 7 per cent respectively. This increase in rates, the first which has occurred since the program began in March 1962, will not be retroactive and will not affect either the interim or payout rates provided for in interim notes received by the banks prior to April 1, 1966.

Sarcoidosis

Long-term Follow-up of Pulmonary Function[*]

LT. COLONEL JOEL H. RICHERT, MC, USA[†], AND CAPTAIN ROBERT A. KLOCKE, MC, USA[‡]

PULMONARY SARCOIDOSIS is often thought to be a benign disease with dramatic radiographic changes but with minimal damage to respiratory function. Numerous observers, however, have reported on the functional impairments which have been detected.[1-11] Often these studies have been on selected patients and do not accurately reflect the incidence of abnormalities in a large unselected group. This report is a review of a large series of unselected patients who were seen and studied at one hospital. Since it is a military population it deals with a predominately young age-group with disease of relatively recent onset. In many of the cases it was possible to repeat the studies at intervals for prolonged periods in order to define the course of the disease. Since some patients had received steroid drugs as treatment, an effort has been made to define the effect these exert on respiratory function.

Material and Methods

Selection of cases. All patients with sarcoidosis who were first seen at Walter Reed General Hospital from July 1, 1955 through December 1962 were included in the study if they met all of the following criteria: (1) noncaseating epithelioid-cell granulomas visualized on tissue biopsy, (2) clinical manifestations compatible with sarcoidosis, (3) roentgenographic abnormalities compatible with sarcoidosis, (4) pulmonary function tests performed, and (5) absence of tuberculosis or any other disease of known etiology which might resemble sarcoidosis.

A total of 102 patients fulfilled all of the criteria and were included in the study. There were 92 males and 10 females. The predominance of males is a reflection of the Army population.

Roentgenographic classification. Determination of pulmonary involvement was based upon the radiologist's interpretation of chest X-ray films. The patients were divided into 2 groups: Group 1 was composed of 30 patients in whom hilar and/or mediastinal abnormalities were described but no parenchymal lesions identified. Group 2 comprised 72 patients in whom parenchymal lung lesions were identified. This division was considered desirable in order to ascertain, if possible, any differences in prognosis. A comparison of the physical characteristics of these groups is contained in table 1.

TABLE 1: General Information

	MALES		FEMALES		Total Group
	Group 1	Group 2	Group 1	Group 2	
Total Subjects	26	66	4	6	102
Negro	12	54	3	5	74
Non-Negro	14	12	1	1	28
Age, yrs. (mean)	29	25	39	29	27
Height, cm. (mean)	177	177	162	167	175
Weight, lbs. (mean)	165	160	134	132	159
Body surface area, m^2 (mean)	1.91	1.89	1.65	1.67	1.87

Pulmonary function tests. All subjects had pulmonary function tests performed in the same laboratory with the same or similar equipment. Follow-up tests were performed at irregular intervals depending upon the nature of the case and the desires of the responsible clinicians. The initial studies were used as the baseline. It was impossible to determine the interval from the onset of sarcoidosis to the baseline studies, but the average time from the diagnosis was less than 1 year, indicating that the majority of patients were in the early stages of their disease.

The methods of measuring pulmonary function are the generally accepted methods employed in other laboratories. Until January 1961 spirometry was performed on a 13.5 liter respirometer[§]

---

[*] From the Department of Medicine, Walter Reed General Hospital, and Division of Medicine, Walter Reed Army Institute of Research, Washington, D. C. 20012.

[†] Chief, Pulmonary and Communicable Disease Service, Walter Reed General Hospital.

[‡] Chief, Pulmonary Function Laboratory, Walter Reed General Hospital.

[§] Warren E. Collins, Inc., 555 Huntington Avenue, Boston 15, Mass.

according to the methods described by Baldwin, Cournand and Richards.[12] Subsequently the internal valves and CO_2 absorber were removed and the methods described by Kory, Callahan, Boren and Syner[13] employed. All results for males were recalculated by the prediction formulae determined by Kory et al. The prediction formulae for females are those of Baldwin, Cournand and Richards. All volume measurements were corrected to body temperature.

The functional residual capacity (FRC) was determined in the sitting position by the helium dilution method as described by Meneely and Kaltreider.[14] Residual volume (RV) was calculated by subtracting the expiratory reserve from the FRC, and the total lung capacity (TLC) was calculated by adding the inspiratory capacity to the FRC. The prediction formulae for the FRC, RV and RV/TLC ratio are those described by Baldwin.

The alveolar carbon dioxide tension (P_ACO_2) was obtained from the expired air by means of an infrared CO_2 meter* with a direct writing recorder. After several breaths were observed a forced expiration was performed and the higher value was used. The subject was then switched to a mixture of 5 per cent CO_2 in oxygen in a closed circuit and the breaths monitored until a plateau was reached, and this value was used as the mixed venous carbon dioxide tension ($P_{\bar{v}}CO_2$). It served mainly as a check on the P_ACO_2.

Ear oximetry was determined with an earpiece oximeter† fastened to the pinna of the ear. Exercise consisted of stepping from the floor to a 14-inch platform and down at a rate of 25 to 35 trips per minute for a total of 2 minutes unless the patient became exhausted sooner. Occasional checks of the ear oximeter against arterial blood were done. This method has inherent limitations but is useful as a screening procedure.

Results

These data confirm the reports of previous investigators who have pointed out that the vital capacity is a sensitive indicator of abnormal pulmonary function in sarcoidosis. An abnormal vital capacity (less than 80 per cent of predicted) was observed in 12 per cent of the males in Group 1 and 70 per cent of the males in Group 2 (table 2). The statistical difference between the mean values of the vital capacity of Groups 1 and 2 of the males was highly significant ($p < .001$). The 10 females do not constitute a large enough group for statistical significance. There was not a consistent pattern in residual volume changes, and no significance can be attached to them since they differ widely on both sides of the predicted normal. Total lung capacity changes tended to parallel the vital capacity, but there were fewer abnormals.

TABLE 2: Baseline Studies

	MALES		FEMALES		Total Group
	Group 1	Group 2	Group 1	Group 2	
Total Subjects	26	66	4	6	102
Vital capacity					
Observed, c.c.	4550	3590	2760	2170	3720
Predicted, c.c.	4990	5080	2910	3150	4860
Per cent	91	71	96	69	77
No. < 80 per cent	3	46	0	4	53
Residual volume	(24)	(65)		(4)	(97)
Observed, c.c.	1610	1460	1280	1060	1470
Predicted, c.c.	1310	1300	890	785	1260
Per cent	124	113	144	136	118
No. < 70 per cent	7	21	0	2	30
No. > 130 per cent	2	12	2	1	15
Total lung capacity	(24)	(65)		(4)	(97)
Observed, c.c.	6130	5060	4040	3600	5220
Predicted, c.c.	6320	6370	3810	3920	6150
Per cent	97	79	107	92	85
No. < 80 per cent	2	32	0	2	36
Forced expiratory volume, 1 sec.	(9)	(20)	(1)	(4)	(34)
Observed, c.c.	3480	2830	2280	1920	2920
Per cent of VC	79	80	81	84	80
No. < 75 per cent	1	5	0	1	7
Maximum voluntary ventilation	(25)	(65)	(3)		(99)
Observed, L/min.	126	118	89	62	116
Predicted, L/min.	178	182	86	97	173
Per cent	72	65	102	64	68
No < 65 per cent	9	35	0	3	47
Alveolar P_{CO_2}	(17)	(42)	(3)	(4)	(66)
Observed, mm. Hg	39	39	37	37	39
Mixed venous P_{CO_2}	(17)	(40)	(3)	(4)	(64)
Observed, mm. Hg	46	46	44	43	45
Hb. Saturation	(25)	(61)		(5)	(95)
Rest, per cent	97.9	96.9	97.2	94.1	97.0
	(24)	(60)	(3)	(5)	(92)
2 minute exercise, per cent	97.5	94.3	95.4	94.5	96.2
No. < 95 per cent*	2	11	1	3	17

N.B. Figures in parentheses refer to actual number of individuals when less than total.

* Includes rest or exercise.

Forty-seven per cent of the entire group had an abnormal (<65 per cent) maximum voluntary ventilation but this did not differentiate between Groups 1 and 2. The CO_2 tension at the end of expiration as well as the mixed venous CO_2 tension, determined by the rebreathing method, was in the normal range except for several individuals in both Groups 1 and 2. Abnormalities (<95 per cent) in arterial O_2 saturation, determined by the ear oximeter method, were observed in 18 per cent of the entire group. The methods employed do not differentiate the causes of arterial unsaturation, i.e., diffusion block, venous admixture, or abnormal ventilation-perfusion relationships.

---

* Spinco Division, Beckman Instruments, Inc., Palo Alto, Calif.

† The Waters Corporation, Rochester, Minn.

Follow-up studies were obtained in 23 individuals from Group 2 who could be divided into "treated" and "untreated" categories. The treated group, consisting of 16 individuals, received steroid drugs between baseline and follow-up studies, and the remaining 7 did not receive steroids. An effort was made to have both groups similar in all respects except for treatment. The time interval from baseline to maximum follow-up in the treated cases averaged 31.0 months and 22.1 months in the untreated cases. The duration of steroid therapy ranged from 2 to 44 months; the usual maintenance dose was 15 to 20 mg. of prednisone.

In a comparison of changes from the baseline in the treated and untreated groups there was a consistent advantage in the treated subjects. Statistical significance is attached to the improvement in vital capacity, total lung capacity, and maximum voluntary ventilation. In the untreated cases there were no statistically significant changes in any measured parameters.

Multiple observations of the vital capacities of the treated and untreated patients were made at irregular intervals during the period of follow-up. In figure 1 these values are plotted in comparison to the initial observations. The follow-up measurements of the treated individuals were predominantly greater than the baseline values. There was no improvement in the follow-up measurements in untreated patients.

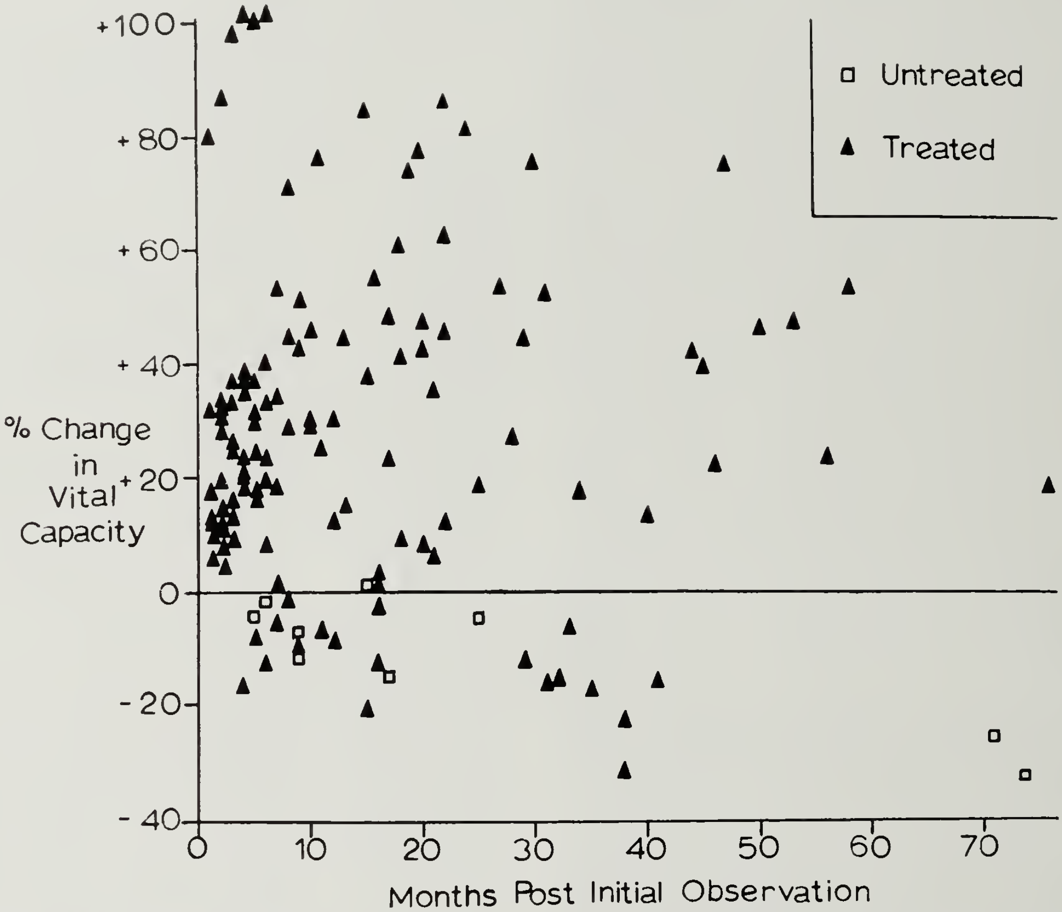


FIG. 1. Multiple measurements of vital capacities in both treated and untreated patients plotted as a function of the time of observation after the initial measurement. The change in vital capacity of any patient is expressed in terms of percentage of the patient's initial vital capacity.

The long-term courses of the vital capacities of 3 treated patients with multiple observations are illustrated in figure 2. These individuals had prompt decreases in their vital capacities when the steroids were discontinued. With reinstitution of treatment the vital capacities returned to previous levels.

Discussion

This review of unselected cases of pulmonary parenchymal, pulmonary hilar, and mediastinal

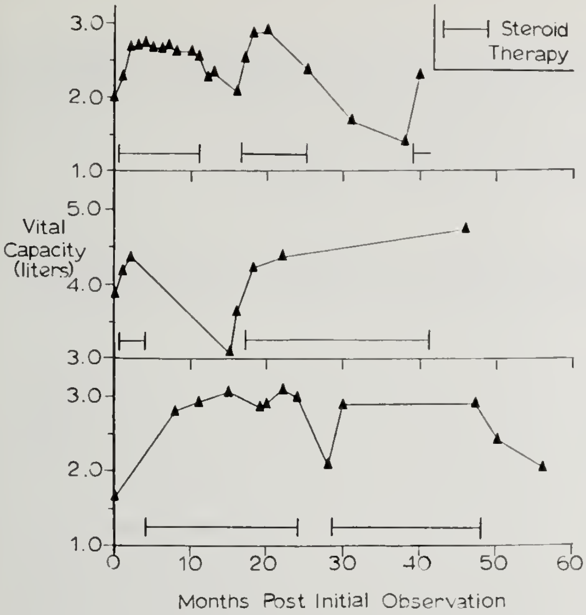


FIG. 2. Vital capacities of 3 patients plotted as a function of the time after the initial observation made in each patient. Periods of steroid therapy are indicated by the horizontal bars at the bottom of each graph.

sarcoidosis indicates that definite abnormalities in lung function exist in 52 per cent of the entire group. This is an impressive percentage, considering the young average age and the early stage of the disease. Although abnormalities were more common and more severe in those individuals with parenchymal lesions visible on chest roentgenograms, those without visible parenchymal lesions also had abnormal vital capacities.

The results of steroid therapy in the 16 treated cases cannot be interpreted as a definitive study, since precise data regarding the amount of therapy are not available and the number of controls was small. It does, however, lend encouragement to those who believe steroids are worthy of a trial. Although there was at least 20 per cent improvement over the baseline value of the vital capacity in 10 of 16 cases who received treatment, there were 6 whose response was less. It is hoped that current prospective studies can define more accurately the group that will respond and the optimum duration of therapy.

The follow-up data were surprising in the lack of significant change from the baseline values in the 7 untreated patients. It was initially anticipated that there would be wide variations in the untreated individuals; instead, they seemed to be left with "scars" that neither became worse nor improved during the 22.1 months of average follow-up.

Summary

A review has been made of pulmonary function in 102 individuals with sarcoidosis involving the lungs, hilar nodes, or mediastinal nodes. The vital capacity was observed to be abnormal in 52 per cent of the entire group.

A comparison was made between a group of 16 individuals who were treated with adrenocortical steroids and 7 who were not treated. A statistically significant improvement in vital capacity, total lung capacity, and maximum voluntary ventilation was observed in the treated group when followed for an average of 31.0 months.

Untreated individuals demonstrated a surprising stability in their pulmonary function tests over the period of follow-up observation averaging 22.1 months.

The writers thank M/Sgt. Frank W. Serwacki, Sp/6 Robert E. Arenz, Mrs. Leah J. Jackson, Sp/5 Robert E. Longmore, Miss Ida F. West, and Miss Mary Jo Agan for their assistance.

References

1. Bousky, S. F., Kurtzman, R. S., Martin, N. D., and Lewis, B. M.: Ann. Intern. Med., 1965, **62**, 939.
2. Coates, E. O., and Comroe, J. H., Jr.: J. Clin. Invest., 1951, **30**, 848.
3. Holmgren, A., and Svanborg, H.: Acta Med. Scand., 1961, **170** (Suppl. 366), 7.
4. Marshall, R., and others: Thorax, 1958, **13**, 48.
5. McClement, J. H., Renzetti, A. D., Himmelstein, A., and Cournand, A.: Amer. Rev. Tuberc., 1953, **67**, 154.
6. Riley, R. L., Riley, M. C., and Hill, H. McD.: Bull. Hopkins Hosp., 1952, **91**, 345.
7. Sellers, R. D., and Siebens, A. A.: Amer. Rev. Resp. Dis., 1965, **91**, 660.
8. Smellie, H., Apthorp, G. H., and Marshall, R.: Thorax, 1961, **16**, 87.
9. Svanborg, N.: Acta Med. Scand., 1961, **170** (Suppl. 366), 39.
10. Svanborg, N.: Ibid., 1961, **170** (Suppl. 366), 75.
11. Williams, M. H., Jr.: J. Clin. Invest., 1953, **32**, 909.
12. Baldwin, E. deF., Cournand, A., and Richards, D. W., Jr.: Medicine, 1948, **27**, 243.
13. Kory, R. C., Callahan, R., Boren, H. G., and Syner, J. C.: Amer. J. Med., 1961, **30**, 243.
14. Meneely, G. R., and Kaltreider, N. L.: J. Clin. Invest., 1949, **28**, 129.

Experiences with Peritoneoscopy at Walter Reed General Hospital, 1964–1965

MAJOR ANTON L. HITZELBERGER, MC, USA*, MAJOR GERALD W. PARKER, USAF, MC†, MAJOR DAVID E. LANGDON, USAF, MC‡, AND COLONEL NORMAN M. SCOTT, JR., MC, USA§

Although peritoneoscopy was initially described by Kelling[1] over 60 years ago, this valuable diagnostic procedure has not received the widespread acceptance in America that it has in Europe. It seems paradoxical that this procedure, which has repeatedly been demonstrated to be a safe, reliable method of establishing or confirming the presence of intra-abdominal disease,[2-8] has languished on the sidelines while newer diagnostic procedures have been received with great acclaim, only to fall into disrepute within a few years and ultimately disappear from clinical practice. As Zoeckler[6] has stated, "The field of internal medicine is replete with the use of diagnostic procedures, the merit of which must be measured by their ability to withstand the test of critical revaluation. Peritoneoscopy is such a diagnostic procedure." It is our intent in this article to cite our recent experiences with peritoneoscopy and to reaffirm that this procedure can be a significant aid to diagnosis.

Analysis of Data

The records of all patients who underwent peritoneoscopy from September 1964 to September 1965 were reviewed. Sixty-three peritoneoscopies were performed on 60 patients whose ages ranged from 14 to 83 years. The group was comprised of 44 men and 16 women. The main indication for peritoneoscopy was to make or to confirm the diagnosis in a patient with perplexing intra-abdominal symptoms. The diagnoses made as a result of the procedure are listed in table 1.

Fourteen patients were found to have a nodular liver, and needle biopsy under direct vision confirmed the diagnosis of cirrhosis. Granulomas were seen within the abdominal cavity of 3 patients. One had Hodgkin's disease, 1 sarcoidosis, and 1 tuberculous peritonitis. Three patients whose gallbladder failed to visualize by roentgenographic means and who failed to show "B" bile in their biliary drainage were found to have a diseased gallbladder by peritoneoscopy. Cholelithiasis was found in all 3 when surgery was performed.

TABLE 1: Distribution of Diagnoses Made or Confirmed by Peritoneoscopy

Chronic hepatitis or cirrhosis	14
Extra-abdominal carcinoma without liver metastases	12
Metastatic disease to the liver	9
Normal findings	7
Protracted hepatitis (beyond 6 weeks)	3
Granulomatous liver disease	3
Cholelithiasis	3
Pancreatic pseudocyst	2
Passive congestion of the liver	1
Chlorpromazine jaundice	1
Splenomegaly (thalassemia)	1
Unsuccessful	4
Total	60

Metastatic implants in the liver or on the peritoneum were found in 9 of the 21 patients who underwent peritoneoscopy because of suspected neoplasm. The 12 remaining patients had had primary tumors in various extra-abdominal locations, but no metastatic disease was found at peritoneoscopy. One of these patients had hepatomegaly and was highly suspect for metastasis of a breast carcinoma. She had early biliary cirrhosis, but no metastases were present grossly or on liver biopsy.

Percutaneous needle biopsy under peritoneoscopic control was performed in 40 patients. Only 4 attempts were unsuccessful. Inability to reach the liver from a subcostal approach was the primary reason for failure.

Peritoneoscopy was unsuccessful in only 4 patients. Extensive adhesions precluded adequate visualization in 1 patient. It was abandoned in

---

* Assistant Chief, Gastroenterology Service, Department of Medicine, Walter Reed General Hospital, Washington, D. C. 20012.

† Resident in Gastroenterology, Department of Medicine, Walter Reed General Hospital.

‡ Chief, Gastroenterology Service, Andrews Air Force Base Hospital, Camp Springs, Md.

§ Chief, Gastroenterology Service, Department of Medicine, Walter Reed General Hospital.

2 others when it became apparent that a pneumo-omentum had been created. Both of these patients had considerable abdominal discomfort for several days, but they recovered without any sequelae. In the fourth unsuccessful examination the patient's small intestine was perforated. This unfortunate event occurred in an elderly man whose increasing jaundice and progressive weight-loss suggested metastases from a previously resected carcinoma of the sigmoid colon. Although a pneumoperitoneum was accomplished without incident, a loop of small intestine had been fixed to the abdominal wall by adhesions and was perforated by the trocar. When the optical unit was introduced the examiner realized that he was within the lumen of the intestine. Treatment with nasogastric suction and broad-spectrum antibiotics was instituted, and the patient was quickly operated upon. Metastatic implants were present throughout the abdominal cavity, and a cholecystojejunostomy was performed.

Discussion

The indications for peritoneoscopy outlined by Ruddock[3] more than 25 years ago include (1) differential diagnosis, (2) determination of the presence of metastasis, (3) corroboration of diagnosis, (4) differentiation and localization of tumor masses, (5) obtaining a biopsy, and (6) determination of the operability of a lesion. The list has been extended to the use of peritoneoscopy for the purpose of examining pelvic organs[9] and has been used in cases of intra-abdominal disease of obscure etiology such as fever of unknown cause and unexplained right upper quadrant pain.[6] For example, the procedure may be considered as an aid in the differential diagnosis of jaundice, hepatomegaly, splenomegaly, and ascites, or to aid in the evaluation of the liver in protracted hepatitis. Moreover, specialized procedures such as direct vision liver biopsy, percutaneous cholangiography,[10] or splenoportography[11] may be considered in those cases in which diagnosis is not otherwise possible. Creutzfeldt et al[12] have recently described the treatment of Salmonella carriers by injecting antibiotics into the gallbladder by direct vision with the aid of peritoneoscopy. Finally, improved techniques for obtaining color photographs through the peritoneoscope have enabled the endoscopist to document his findings for the benefit of others. In general, peritoneoscopy will prove to be of value in any case in which visualization or biopsy of abdominal organs might help in a positive or negative way.

The technique of peritoneoscopy has been outlined by numerous authors, including Ruddock,[3, 5] Benedict,[13] and Vilardell[14] in America. More comprehensive treatises have been provided by Korbsch,[15] Schmidt,[16] and more recently Kalk[2] in Europe. There is very little variation in technique. Although several domestic and foreign instruments are available, selection of the type of instrument depends upon individual preference. The availability of an endoscopy room or operating room should pose little problem in most hospitals, but the availability of a trained endoscopy team is another matter, and the infrequent call for peritoneoscopy by clinicians may stem from this very problem. Nevertheless, the technique of performing the procedure is easily acquired by the interested physician who may obtain adequate information by reading from available papers. Unfortunately, no treatise comparable to Kalk's monograph is available in the English literature.

Although this procedure is undoubtedly safe, complications can and do occasionally occur. Mortality due to peritoneoscopy is quite low. Uhlich and Haubrich[17] combined previously published data and found 6 deaths in 11,048 peritoneoscopies. These deaths were attributed to improper case selection or deviation from prescribed technique. In Kalk's series,[2] 2 deaths occurred in 6,462 procedures. The mortality from several articles has ranged from 0.1–0.3 per cent,[3, 5, 6] although the reports from Kalk and Uhlich and Haubrich show that it probably is below 0.1 per cent. Complications most commonly arise in patients who are not properly selected for the procedure. Those who have had extensive upper abdominal surgery must be considered risks because adhesions may obscure vision and prevent biopsy; they may tend to fix bowel loops and permit perforation, and frequently they bleed when traumatized. Patients who have cardiac decompensation or advanced pulmonary emphysema are extremely poor risks, and those who have ascites should be examined only under pressing circumstances. Patients with acute abdominal disorders, especially intestinal obstruction or perforation, should not be selected for peritoneoscopy since surgical exploration is the appropriate diagnostic and therapeutic approach to such cases. Severe coagulation disorders preclude the procedure, especially when direct vision biopsy is contemplated, but a mildly depressed prothrombin time usually is not a cause for concern.

There are several advantages of direct vision liver biopsy during peritoneoscopy over percutaneous liver biopsy, and an excellent account of this subject has been given by Uhlich and Haubrich.[17] The gross appearance of the liver can be studied and added to the histopathologic findings; areas of disease or tumor can be selectively used for biopsy; "unsafe areas" such as the gallbladder or capsular vessels can be avoided; and post-biopsy bleeding or bile ooze can be noted and earlier correction undertaken. Finally, the remainder of the visualized structures within the abdomen can be noted for disease. Kalk[2] reported that 4,000 direct vision liver biopsies were performed by him without the need to resort to coagulation of the biopsy site or surgery.

The limitations of peritoneoscopy are important to bear in mind. They include (1) inability to visualize every intra-abdominal structure or to see all of those which can be brought into view; (2) inability to feel any of the structures; (3) inability to give therapeutic benefit; and (4) inability to consistently control bleeding from biopsy sites, although at least with this procedure the presence of prolonged bleeding from a biopsy site is detected immediately. Peritoneoscopy thus has certain limitations, but when compared to laparotomy it has far less risk of morbidity and mortality and can be performed on many patients who are poor surgical risks, since it does not require general anesthesia. Furthermore, it is inexpensive and requires at most a few days of hospitalization.

Peritoneoscopy should not be required to accomplish more than the purpose for which it is performed. The procedure should not be discredited because the operator did not visualize the pelvic organs after he had made a diagnosis of Laennec's cirrhosis, particularly if the purpose of his examination, for example, was to determine what type of hepatic disease was present in a patient with deranged liver function. Accomplishment of purpose is of prime importance when dealing with statistics about peritoneoscopy. In 1957 Ruddock[5] published data on 1,500 consecutive cases and showed that the purpose of the peritoneoscopy was accomplished in all but 27 patients. The accuracy of diagnosis made with biopsy and visualization combined, or the "fulfillment of the purpose" of the peritoneoscopy in our series was 95.3 per cent. These results compare favorably with those of Ruddock[5] (93.6 per cent), Benedict[13] (93 per cent), and Aronson and Parker[7] (94 per cent).

The most ardent proponents of peritoneoscopy are in complete agreement with Ruddock,[5] who stated, "Although it is a procedure of choice for intra-abdominal examinations in many cases, peritoneoscopy will not and cannot wholely supplant laparotomy for purposes of examination, not only because its usefulness is limited to the visually accessible regions of the peritoneal cavity, but also because under certain conditions the procedure is definitely contraindicated. On the other hand, laparotomy for diagnostic purposes is also handicapped by visual limitations through the abdominal wound and is a definite hazard in the aged, the infirm, the anemic, and the poor surgical risks. Within the limitations of its usefulness, peritoneoscopy offers a valuable extension of the internist's armamentarium. . . ."

Summary

Peritoneoscopy with direct vision liver biopsy has been eagerly accepted by its advocates and is being used more frequently by them during recent years. Over 20,000 procedures have been reported, with a combined mortality rate of approximately 0.1 per cent. This procedure has been demonstrated to be a safe, reliable method for establishing or confirming the presence of intra-abdominal disease, especially those pathologic processes located in or about the hepatobiliary system.

Sixty-three peritoneoscopies were performed on 60 patients at Walter Reed General Hospital during a 1-year period. The procedure was successful in accomplishing its purpose in 95 per cent of the cases, which closely correlates with the experience of others. There was no mortality, but 1 intestinal perforation occurred.

Peritoneoscopy is and will remain a diagnostic tool and is not intended to replace surgical exploration or other laboratory or clinical tests. The procedure is associated with low morbidity and mortality if the prescribed technique is rigidly observed.

The authors gratefully acknowledge the assistance of S/Sgt. Calvin R. Anderson, Medical Specialist, without whose aid these studies could not have been performed.

References

1. Kelling, G.: Muenchen. Med. Wschr., 1902, **49**, 21.

(Continued on page 236)

Pathologic Variations of the 17–18 Trisomy

MAJOR ROBERT G. SCHERZ, MC, USA*

In 1960 Edwards and his group[1] in England and Smith and his group[2] in the United States published nearly simultaneously reports of a new autosomal trisomy which now has several names: the 17, 17–18, 18, and E trisomy. The primary purpose of this article is to point out the wide variation of pathologic abnormalities present in this chromosomal disease, using as examples 6 previously unreported patients investigated during the past 2 years at Walter Reed General Hospital.

The perinatal period is frequently marked by low birth-weight, early respiratory distress, poor suck, weak cry, and the observation of varying numbers of minor and severe congenital anomalies. In spite of a seemingly ominous beginning, most of the reported patients survive the perinatal period but fail to thrive in spite of an adequate caloric intake and succumb most commonly to infection and/or cardiovascular failure, usually within the first 2 years of life.[3-16] An exception is a 10½-year-old girl in California with marked mental retardation and other stigmata of the syndrome.

Of all the reported findings in the 18 trisomy, the following historical and physical findings appear to be present in the majority of patients and should lead the examiner to the correct diagnosis:

1. Low birth-weight, in spite of prolonged gestation
2. Failure to thrive
3. Apparent mental retardation
4. Hypertonicity
5. Low-set and/or malformed ears
6. Prominent occiput
7. Small mouth with high-arched palate
8. Micrognathia
9. Decreased subcutaneous tissue
10. Congenital heart disease (interventricular septal defect most common)
11. Short sternum
12. Ventral and/or inguinal hernia
13. Small pelvis
14. Limited hip abduction
15. Flexion deformity of fingers with index finger overriding third finger
16. Simple arch fingerprints
17. Renal anomalies (double ureter and horseshoe kidney most common)
18. Hypoplasia of muscles (deltoid and rhomboid most common)
19. Syndactyly of second and third toes
20. Rocker bottom feet.

The following 6 case reports serve to illustrate the common and some of the unusual pathologic variations of this syndrome. Chromosomal analysis of incubated peripheral blood leukocytes revealed 17–18 trisomy. All family chromosome studies of parents and siblings were indistinguishable from normal.

Report of Cases

Case 1. The patient, A.F., a Caucasian female baby, was born on December 5, 1964 following a full-term gestation to a 37-year-old mother and a 38-year-old father. The pregnancy was 44 weeks, and delivery was described as uneventful. The infant's birth weight was 5 lbs., 14 oz., with length of 18½ inches.

There was no history of consanguinity, mental deficiency, gross congenital anomalies, or deformity on either side of the family for 2 generations. The infant breathed spontaneously at birth but during the first 24 hours of life was noted to have some mild cyanosis and respiratory distress.

Shortly after birth physical examination revealed a dusky, small, scrawny, Caucasian female baby in respiratory distress with a feeble cry. Her physical findings are summarized in table 1.

The baby had congestive heart failure and subsequently was digitalized. Over the next few days there was little improvement, and she remained feeble and somewhat dusky. By the end of 2 weeks she still remained somewhat cyanotic and in mild respiratory distress. During the course of hospitalization an abdominal mass was palpated, and an intravenous pyelogram revealed a horseshoe kidney. At 6 weeks of age the weight was 4 lbs., 11 oz. The infant appeared dehydrated, hypoactive, and dusky. She continued to deteriorate, became apneic, and expired on February 6, 1965 at the age of 8 weeks. Postmortem examination disclosed the following major defects:

1. Cardiovascular system:
   a. A high ventricular membranous septal defect
   b. Bicuspid pulmonary and aortic valves
   c. Patent ductus arteriosus
   d. Mild coarctation of the aorta proximal to the patent ductus

---

* Assistant Chief, Pediatric Service, Walter Reed General Hospital, Washington, D. C. 20012.

   e. Origin of the left coronary artery above the aortic valve cusp
2. Genitourinary system:
   Horseshoe kidney with double right ureters.

Case 2 (figures 1 and 2). The patient, M.M., a Caucasian female baby, was born on October 6, 1964 to a 39-year-old gravida III, Para 4 mother and a 42-year-old father. There was no family history of leukemia, unusual radiation, drug ingestion, or gross congenital anomalies on either side of the family. The pregnancy extended 44 weeks. Delivery was said to be uneventful.

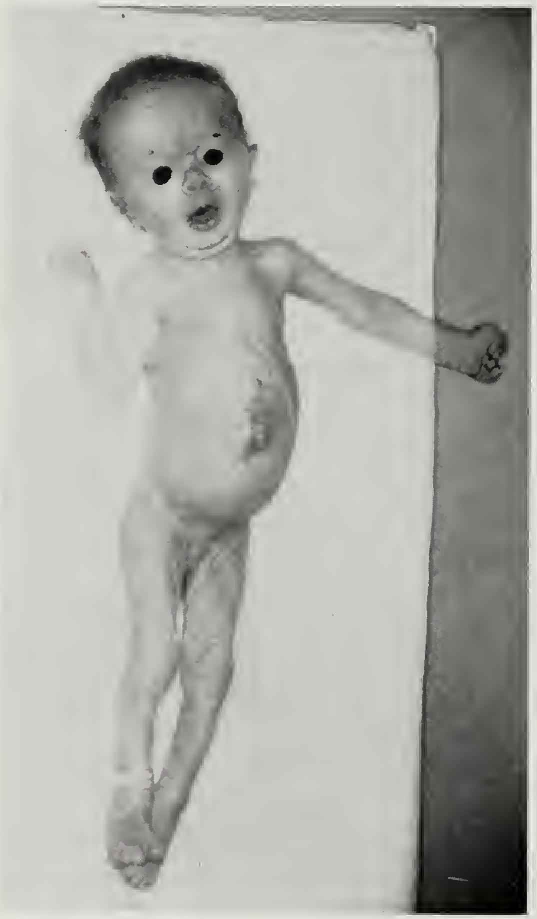


FIG. 1. Case 1. Typical malnourished appearance in 17–18 trisomy.

The birth weight was 5 lbs., 4 oz.; head circumference, 10¼ inches; chest circumference, 10½ inches; abdominal circumference, 10¼ inches. Further physical findings are summarized in table 1.

On the day of birth the infant underwent surgery for correction of the omphalocele, but postoperatively she had episodes of apnea and became quite cyanotic following oral feedings. At 2 days of age she was digitalized but continued to do poorly. When the child was 1 month of age she was transferred to Walter Reed General Hospital where her weight was recorded as 4 lbs., 9 oz. In spite of adequate caloric intake by gavage feedings the patient did not gain weight. She died on November 15, 1964 during a recurrent apneic episode.

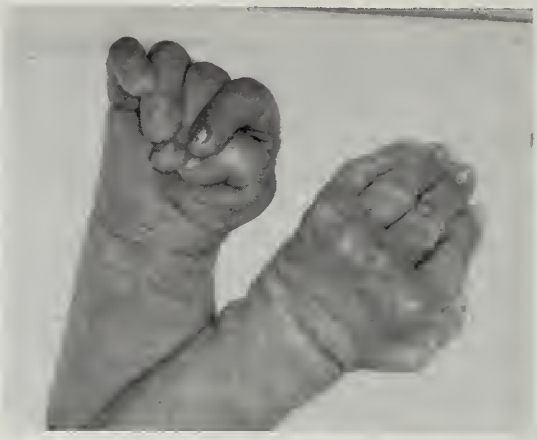


FIG. 2. Case 1. Characteristic hand deformity in 17–18 trisomy.

Laboratory studies revealed no gross abnormalities. Postmortem examination revealed the following additional abnormalities:

1. Cardiovascular system:
   a. Interventricular septal defect
   b. Bicuspid aortic valve
   c. Bicuspid tricuspid valve
   d. Abnormal origin of the left coronary artery from the left pulmonary artery
   e. Patent ductus arteriosus
2. Gastrointestinal tract:
   a. Irregular anomalous liver with large quadrant lobe
   b. Partial malrotation of the cecum
   c. Ectopic pancreas in the mid-jejunum
3. Genitourinary tract:
   Horseshoe kidney.

Case 3. The patient, K.H., a Caucasian female infant, was born on April 12, 1963 to a 21-year-old primigravida and 23-year-old father following a 42-week gestation which was complicated by 2 distinct bouts of pyelonephritis in the mother. The mother stated that during the pregnancy she noted no fetal movement until the seventh month, and then it was feeble. Polyhydramnios was noted at birth. There was a negative history of excessive X-radiation, mental retardation, and consanguinity.

At birth the infant's weight was 4 lbs. Multiple anomalies were noted. The infant had a very poor cry and required intermittent positive pressure oxygen for approximately 5 minutes before establishing normal respirations. The multiple anomalies noted included micrognathia, low-set ears, high-arched palate, and overriding of the third finger by the index finger, bilaterally. The infant had a very poor suck which accentuated the failure to thrive. On the second day of life jaundice was noticed, as was inflammation of the umbilical stump. Serum bilirubin reached a peak of 16 mg. Because of the multiple congenital anomalies and feeding problem she was transferred to the United

TABLE 1: Summary of Pathologic Variations in Six Cases of 17–18 Trisomy

	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6
General						
Failure to thrive	X	X	X	X	X	X
Prolonged gestation	X	X	X	X	X	X
Decreased fetal activity		X	X		X	
Low birth weight	X	X	X	X	X	X
Apparent mental retardation	X	X	X	X	X	X
Hypertonicity	X	X	X	X	X	X
Polyhydramnios			X			
Decreased crying	X	X	X	X	X	X
Skin and Appendages						
Decreased subcutaneous tissue	X	X	X	X	X	X
Absence or hypoplasia of finger and toenails	X	X	X	X	X	X
Atrophic nipples	X	X	X	X	X	X
Simple arches for fingerprints	X	X	X	X	X	X
Simian lines	X	X	X	X	X	
Hypertrichosis	X	X	X	X	X	X
Abnormalities of the Eyes						
Coloboma				X		
Ptosis of upper eyelids	X	X			X	X
Irregular, acentric pupils	X	X	X	X	X	X
Mongoloid slant		X	X			
Antimongoloid slant	X			X	X	
Abnormalities of the Ears						
Low-set, small lobules, partial helix	X	X	X	X	X	X
Abnormal response to sound	X	X	X	X	X	X
Abnormalities of the Mouth						
Cleft lip				X		
Micrognathia	X	X	X	X	X	X
High-arched palate	X	X	X	X	X	X
Abnormalities of the Chest						
Shield-like configuration	X		X	X	X	X
Pigeon breast		X				
Cardiovascular						
Congenital heart disease	X	X	X	X	X	X
Ventricular septal defect	X	X	X		X	X
Patent ductus arteriosus	X	X	X			X
Cardiac valve anomalies	X	X	X		X	X
Aberrant origin of left coronary artery	X	X				X
Coarctation of the aorta	X					X
Respiratory						
Bilobed right lung			X			
Quadrilobed right lung						X
Gastrointestinal						
Pyloric stenosis					X	
Omphalocele		X				
Ectopic pancreas		X	X			
Inguinal hernia					X	
Malrotation of the colon		X				X
Meckel's diverticulum			X			X
Biliary cirrhosis			X			
Umbilical hernia		X		X	X	X
Hypoplastic gallbladder						X
Stricture of the cystic duct			X			
Genitourinary						
Horseshoe kidney	X	X				
Reduplication of ureters and/or pelvis	X		X			
Hydrocele					X	
Muscle Skeletal						
Flexion deformity of fingers	X	X	X	X	X	X
Phocomelia					X	
Hypoplastic pelvis	X	X	X	X	X	X
Congenital hip dysplasia	X	X	X	X	X	X
Syndactyly, second and third toe, partial		X		X		X
Rocker bottom feet	X	X		X	X	X
Short sternum	X	X	X	X	X	X
Prominent occiput	X	X	X	X	X	
Overriding of second finger over third	X	X	X	X	X	X
Short great toe	X	X	X	X	X	X
Varus deformities of feet			X		X	
Hypoplasia of skeletal muscle	X	X	X	X	X	X

States Army Hospital in Frankfurt, Germany, where she was fed by an indwelling nasogastric tube. She tolerated the feedings but did not gain weight normally. A large left-to-right shunt with congestive heart failure was diagnosed, and she was digitalized. Because of the failure to thrive and the apparent heart problem the baby was subsequently transferred to Walter Reed General Hospital at the age of 3 months. Additional abnormal physical findings are summarized in table 1. Laboratory data during the hospitalization revealed no gross abnormality.

The baby's condition remained static initially, but gradually deteriorated following several episodes of apparent congestive heart failure. She also developed a Pseudomonas conjunctivitis and a perirectal abscess. In spite of vigorous therapy she succumbed on September 3, 1963. During nearly 2 months of hospitalization she gained 10¼ ounces. Postmortem examination revealed the following additional abnormalities:

1. Respiratory system:
   a. Bilobed right lung
   b. Atelectasis, focal, all lobes
   c. Bronchopneumonia, both lobes, left lung
2. Cardiovascular system:
   a. Interventricular septal defect of the membranous portion
   b. Bicuspid, tricuspid valve
   c. Patent foramen ovale
   d. Patent ductus arteriosus
3. Gastrointestinal system:
   a. Meckel's diverticulum
   b. Stricutre of the cystic duct and common bile duct with secondary dilatation of the gallbladder
   c. Biliary cirrhosis
4. Genitourinary system:
   Duplication of the collecting system with double pelvis and ureter on the right side.

Case 4. The patient, V.K., a Caucasian female baby, was born to a 22-year-old gravida I, Para 1 mother and a 24-year-old father on June 10, 1963. The pregnancy was 42 weeks' gestation. Labor and delivery were recorded as normal. The birth weight was 5 lbs., 11½ oz., and the length, 19½ inches. The infant's initial Apgar was 7, and no resuscitation was required. She entered the hospital at the age of 5 months for evaluation. There was a negative history of X-radiation, consanguinity, and mental retardation.

Physical examination at delivery revealed a small Caucasian female with multiple congenital anomalies: an elf-like facies, small mandible, epicanthal folds bilaterally, and mongoloid palpebral slant. The physical findings are summarized in table 1.

The hospital course was characterized by failure to thrive, congestive heart failure requiring digitalization, and a urinary-tract infection with *Klebsiella aerobacter* and *E. coli* reported on culture. The baby was given appropriate antibiotics and was subsequently discharged to home care. She had a repair of her cleft palate at the age of 13 months without difficulty. At the time of this publication she is still living though markedly retarded in growth and development. At the age of 29 months she weighed 16 lbs. and functioned mentally near the level of an 8-month-old infant.

Case 5 (figures 3, 4 and 5). The patient, T.G., a Caucasian male, was born to a 42-year-old mother and a 45-year-old father on April 10, 1963 with gestation at 45 weeks. There was decreased intrauterine activity throughout the pregnancy. The infant's birth weight was 5 lbs., 11 oz. At delivery he had respiratory distress and required oxygen for several minutes.

There are 4 living siblings, all in excellent health. A male fetus was aborted at 20 weeks' gestation following this case report in 1964. He was malformed. No other information is available. There is a negative history of exposure to X-radiation or drug ingestion during pregnancy.

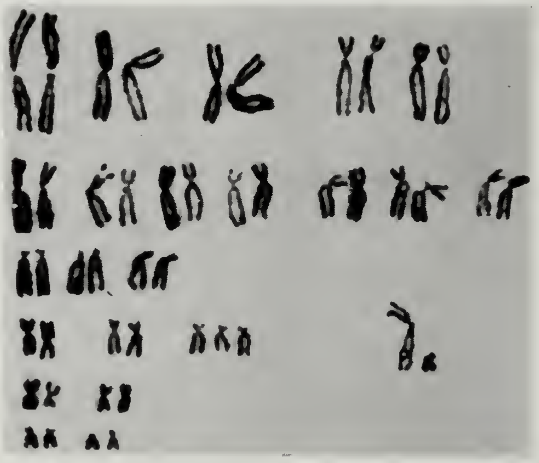


FIG. 3. Karyotype in 17–18 trisomy. The modal number is 47 with an extra autosome in the 17–18 group.

Physical examination at birth revealed a small Caucasian male with poor suck reflex and moderate respiratory distress. Obvious orthopedic problems were noted initially, namely, phocomelia, deformities of the feet, and probable bilateral dislocated hips. Because of the poor suck reflex he was initially fed by gavage and slowly over a 2-week period was able to take adequate amounts by nipple. The examination is summarized in table 1. The presence of upper limb deformities including phocomelia was of particular interest. There were absence of the left thumb and left radius and radial deflexion of the hand of 105°. The right hand revealed a rudimentary thumb, simian line, hypoplastic thenar mass, and dislocation of the hand radially of 100°. The radius on the right was hypoplastic.

During 3 courses of hospitalization at Walter Reed General Hospital the infant demonstrated marked failure to thrive, congestive heart failure, and clinical evidence of hypertrophic pyloric stenosis. In addition, there was marked retardation of growth and development. He died following aspiration of the stomach con-

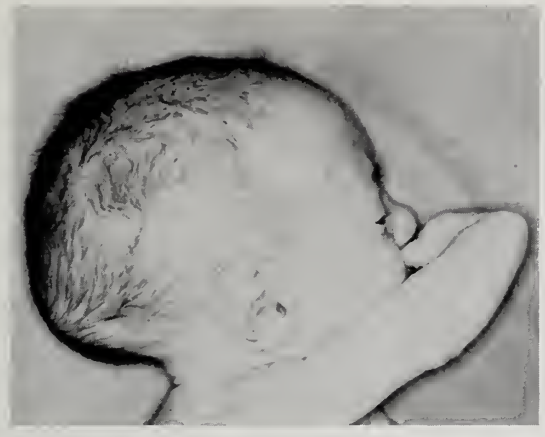


FIG. 4. Case 5. Note characteristic prominent occiput, ear deformities, hypertrichosis of forehead, and shallow orbits.

tents on January 22, 1964. Additional findings at postmortem examination were as follows:

1. Cardiovascular system:
   a. A high membranous ventricular septal defect, 1 cm. in diameter
   b. Anomalous tricuspid valve
   c. Incomplete differentiation of the valve leaflets and pseudovegetations of the mitral valve
2. Gastrointestinal system:
   Pyloric "tumor," 1.5 cm. long and 8 mm. thick
3. Genitourinary system:
   Small right hydrocele.

Case 6. The patient, S.P., a Caucasian female infant, was born October 20, 1965 to a 19-year-old primigravida and a 24-year-old father following a 42-week gestation which was uncomplicated. Delivery was normal, but the infant required resuscitation at birth. There was a negative history of excessive X-radiation, mental retardation, and consanguinity.

The infant was transferred to Walter Reed General Hospital at the age of 4 weeks for evaluation. Her physical findings are summarized in table 1. Her general appearance and activity appeared normal. Laboratory tests were normal. An electroencephalogram was normal.

The infant failed to thrive despite adequate food intake by nipple and gavage. She was extremely quiet, but with stimulation she would cry with a high pitched voice. The cry would stop shortly after the stimulus was removed. On November 18, 1965 she died suddenly. Postmortem findings revealed the following additional abnormalities:

1. Respiratory system:
   Quadrilobed right lung
2. Cardiovascular system:
   a. 8 mm. interventricular septal defect of the membranous portion
   b. Bicuspid aortic valve
   c. High take-off of the left coronary artery 3 mm. above the aortic cusp
   d. Patent ductus arteriosus
   e. Coarctation of the aorta, preductal
3. Gastrointestinal system:
   a. Meckel's diverticulum
   b. Hypoplastic gallbladder
   c. Partial malrotation of the colon.

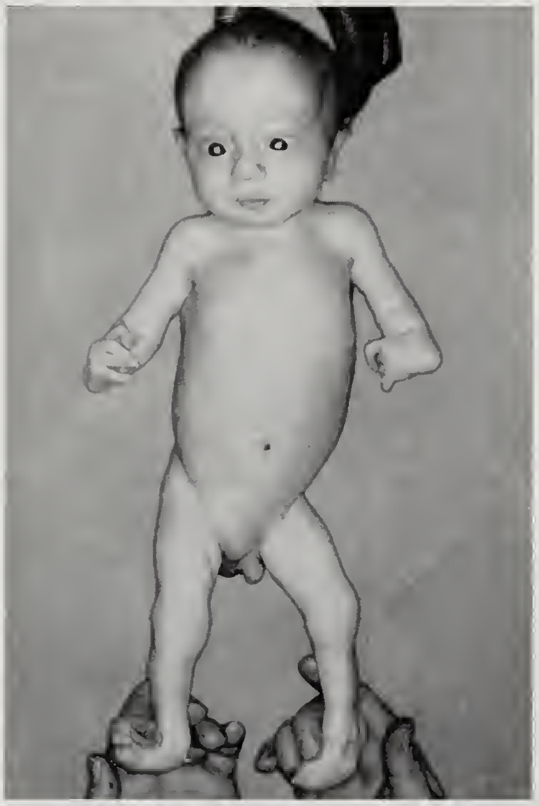


FIG. 5. Case 5. Note umbilical and inguinal hernias, deformities of the extremities, small mouth, and micrognathia.

Table 2 is a summary of the family history and survival in the 6 cases reported in this paper.

TABLE 2: Summary of Family History and Survival in Six Cases of 17–18 Trisomy

Case	Maternal Age	Paternal Age	Gestation (weeks)	Birth Weight	Sex	Normal Siblings		Survival
						Male	Female	
1	37	38	44	5–14	female	1	2	8 weeks
2	39	42	44	5–4	female	2	1	5½ weeks
3	21	23	42	4–0	female	0	0	5 months
4	22	24	42	5–11	female	0	0	32 months*
5	42	45	45	5–11	male	2	2	9 months
6	19	24	42	5–0	female	0	0	5½ weeks

* Alive January 1, 1966.

Discussion

Since the original papers describing the 17–18 trisomy were published in 1960 subsequent case reports have widened the spectrum of the pathologic abnormalities included in this trisomy syndrome. In addition, case reports have pointed out that advanced maternal age is correlated with increased incidence of the 17–18 trisomy. However, to date maternal age on the average has been approximately 2 to 4 years less than that usually associated with Down's syndrome. In this small series of 6 patients the average maternal age was 30 years. It is interesting also that the gestational period of infants afflicted with this trisomy appears to be elongated, with an average of 42 weeks despite low birth weights between 5 and 6 pounds. Histories extracted from mothers also indicated that fetal activity was not noted until a later stage in pregnancy than usual. Polyhydramnios has been reported several times. In addition to the small weight at birth, which is characteristic of the 17–18 trisomy, the placenta is frequently recorded as being small, and on occasion a single umbilical artery is found.

Most infants with this trisomy seem to survive the perinatal and neonatal period, only to die from cardiovascular or respiratory disorders during early infancy. However, in spite of the well-recognized characteristic findings of the 17–18 trisomy some of these patients are not recognized during the neonatal period. For example, one of our patients was initially admitted to Walter Reed Hospital for a correction of profound orthopedic abnormalities, and it was only after admission that the stigmata of the 17–18 trisomy were correctly interpreted. This has led us to believe that the full spectrum of the 17–18 trisomy with all its pathologic variations needs further elucidation. In several of the case reports, for example, reference has been made to apparent deafness in these infants. In an attempt to verify this observation, 2 of our patients were tested for hearing with the use of electroencephalographic responses to sound made by repetitive standardized clicks and comparing these responses to those of normal infants of the same age. The results showed that 17–18 trisomy infants tested by us did have cortical responses to sound which were 50 decibels above the normal adult threshold. These responses were abnormal in wave form. This wave-pattern variation represents an abnormal arousal response to sound. It is difficult to ascertain, however, whether this abnormal response is or is not directly related to the degree of mental retardation which these infants have.

Another uncommon variation of the 18 trisomy is phocomelia. Though our patient with phocomelia is not the first to be described, his skeletal abnormalities further demonstrated an interesting feature of this trisomy; namely, in spite of a rather well-set pattern of defects known with this trisomy on occasion one organ system of the body seems to be more severely involved than others.

An interesting observation is the relationship of early death and abnormal take-off of the left coronary artery in 3 patients (cases 1, 2 and 6). In each instance death was sudden, and no immediate cause was determined. Early sudden death may be related to decrease of perfusion through the left coronary artery during systole. Plans are being made to continually monitor the electrocardiogram of the next patient in hopes of demonstrating significant transient T-wave changes which heretofore have not been demonstrated on routine electrocardiograms. The average age of survival of these 3 patients was about 6 to 7 weeks.

In spite of a multitude of laboratory tests performed on our 6 patients with the 17–18 trisomy the only abnormality discovered was a relative hypogammaglobulinemia in 1 patient. This trisomy has been described in the Negro and Oriental as well as the Caucasian races. There appears to be a definite sex relationship with a ratio of 3:1 female over male. The reason for this sex bias is undetermined.

The etiology of the 18 trisomy may be related to nondisjunction occurring during gamete formation. Although this would be a reasonable explanation for the trisomy, there has been no direct proof of this occurring in the human. Other chromosome defects have been reported with the same clinical syndrome. Occasional examples of mosaicism and translocation have been reported. Trisomy of a deleted member of group E has been suspected a number of times. One of the few examples of ring chromosome formation in man has been associated with an incomplete variant of the 17–18 trisomy syndrome.

Though to date the number of infants and children reported is approximately 100, it would appear that, as physicians become more aware of the common findings of this trisomy, a truer estimate of the incidence will evolve. One author believes it is roughly the same as 21 trisomy, namely, 1 out of every 500 to 600 births. This estimate seems to be quite high.

In spite of careful investigation there appears to be no significant correlation between maternal radiation or drug ingestion during pregnancy and 17–18 trisomy. Recently Sever[17] has described the isolation of Rubella virus from infants with

(Continued on page 236)

The Management of Esophageal Stenosis

COLONEL NORMAN M. SCOTT, JR., MC, USA[*], AND MAJOR ANTON L. HITZELBERGER, MC, USA[†]

Esophageal stenosis, whether due to a benign stricture or an inoperable malignant lesion, always is associated with dysphagia, regurgitation, aspiration, and slow starvation. Unless it is relieved the patient faces a lingering death, unable even to handle his own salivary secretions. Heroic resections with esophagogastrostomy or colon-segment replacement are major surgical undertakings, and they are not always satisfactory. The operative mortality is high, and stenosis at anastomotic sites may occur. Gastrostomy is not the answer, since it does not solve the problem imposed by the patient's own saliva.

Transoral dilation frequently will save the day. In many instances, the degree of stenosis and the length of esophagus involved discourage any attempt to dilate from above, but instruments and techniques are available which make it possible to handle the most extensive stricture.

The basic principles are simple. If severe esophagitis due to stasis is present above the stricture, it should be treated first, unless total occlusion of the lumen threatens. This is best accomplished by removal of accumulated debris by suction, by the administration of bismuth subcarbonate[‡], and, if secondary bacterial infection is present, by appropriate parenteral antibiotics. Progressively larger bougies are then passed through the esophagoscope, under direct vision if necessary. Advance from one size to the next is undertaken with care, especially when firm resistance is encountered, but one plunges boldly ahead whenever possible.

Initially, dilations probably will be required daily if progress is to be maintained. Finally, it is important for the patient and the physician to understand that, in many instances, follow-up dilations will be necessary indefinitely in order to maintain satisfactory patency of the esophageal lumen. Patients of all ages from childhood to old age have been taught the trick of self-dilation, and most are able to accomplish this at home with little or no inconvenience or danger.

Three case reports are presented to illustrate the use of instruments and techniques which can bring satisfactory, even dramatic, relief.

Illustrative Cases

Case 1. A 47-year-old white vagrant Veterans Administration beneficiary was admitted to an Army General Hospital when, after several months of progressive dysphagia, not even his daily ration of wine could be swallowed. His past and present history were surprisingly vague, considering what was found on barium swallow (figure 1-a). He dimly recalled being operated upon through a chest incision several years earlier in another state because of "an ulcer," probably of the esophagus. In addition, he had signed himself out of several state hospitals before completion of treatment for pulmonary tuberculosis; a chest X-ray film showed severe fibrosis in both apices. Old records could never be located.

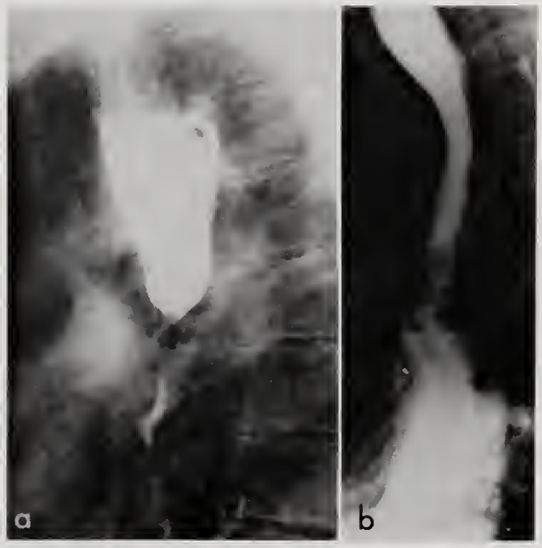


FIG. 1. (a) Barium swallow, patient no. 1, before dilations; (b) barium swallow after dilations.

Esophagoscopy revealed severe erosive esophagitis and almost complete occlusion of the lumen 29 cm. from the teeth.[§] The 4 mm. opening that remained was plugged by accumulated blood clots and debris and was located with difficulty only after careful suctioning. Biopsy showed intense inflammation but no evidence of malignancy nor of tuberculosis. Complete occlusion of the lumen was considered imminent, and treatment with transoral dilations was undertaken despite the severity of the esophagitis. Repeated attempts to induce passage of a string with attached lead weight were unsuccessful. Therefore, the dilations were carried out daily under direct vision through the esophagoscope. The Eder-Peustow wire guide was not available (figure 2-b). Initially, an 8 Fr. semi-rigid probe (figure 2-a) was pushed through the stricture. Thereafter, for 17 successive days gradually larger instruments were employed until the lumen accepted a 28 Fr. dilator, the largest accommodated by the esophagoscope.

---

[*] Chief, Gastroenterology Service, Department of Medicine, Walter Reed General Hospital, Washington, D. C. 20012.

[†] Assistant Chief, Gastroentrology Service, Department of Medicine, Walter Reed General Hospital.

[‡] Bismuth subcarbonate, 1 teaspoonful 4 times daily in dry powder form. This acts as an astringent and has slight chemotherapeutic properties; it enhances healing of esophagitis. Patients taking it should be warned that their stools may be black.

[§] Esophagoscopic measurements are made from the upper incisor teeth: In most adults the cricopharyngeus muscle, which marks the proximal end of the esophagus, is at 15 cm., the esophagogastric junction at 40 cm.

This vigorous program of daily dilation was found to be necessary during the early stages, since skipping even a single day permitted contraction of the stricture which required repetition of several steps to make up for lost ground. From then on Hurst mercury-filled bougies (figure 2-c) were found to have sufficient weight to carry them through the stricture, and the lumen was progressively enlarged to 48 Fr. where it was maintained by passage of the bougie 3 times weekly (figure 1-b). There was concurrent improvement in the patient's ability to swallow, and he gained weight rapidly. There was no improvement in his garrulous nurse-baiting personality; and it was a constant source of amazement to all that he readily accepted the vigorous therapeutic program outlined above but violently objected to a hot bath and a haircut. Attempts were made to instruct him in the technique of passing a Hurst bougie himself, since it was obvious that dilations would be necessary indefinitely if a patent lumen was to be maintained. This was progressing well until the patient learned that upon discharge from the hospital he would have to purchase a Fr. 48 Hurst bougie himself (cost, $10). He thereupon signed out of the hospital against advice and was never seen again.

All efforts at social and psychiatric rehabilitation of this individual failed, and much of the professional satisfaction which could have been gained was lost. However, the experience demonstrated what can be accomplished by careful, persistent, vigorous manipulations through the esophagoscope without resort to gastrostomy or other surgery.

Case 2. A 49-year-old white woman was hospitalized because of progressive dysphagia, to the degree that even liquids could be swallowed only with difficulty. She experienced frequent episodes of choking and coughing. There was nothing in the past history to suggest the etiology of the long stricture which extended from above the level of the aortic arch to the cardia (figure 3-a). Esophagoscopy revealed severe esophagitis with mucosal ulceration and purulent exudate which, on culture, grew *E. coli* and *Aerobacter aerogenes;* biopsy showed severe infiltrative and exudative esophagitis. Treatment was begun with bismuth subcarbonate and broad spectrum antibiotics which produced sufficient improvement in the esoph-

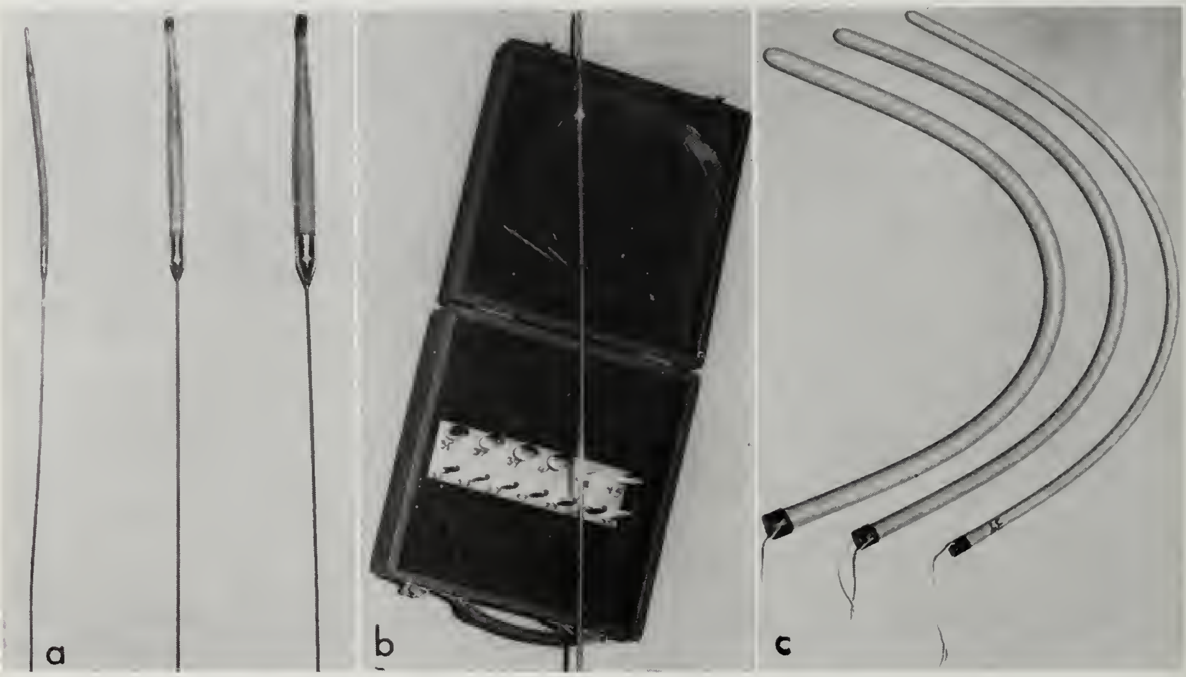


FIG. 2. (a) Semirigid probes which are passed under direct vision through the esophagoscope; (b) Eder-Peustow dilator outfit. The wire coiled at the top is used as a leader over which the dilators are passed; (c) Hurst mercury-filled bougies which are carried through a stricture by their own weight.

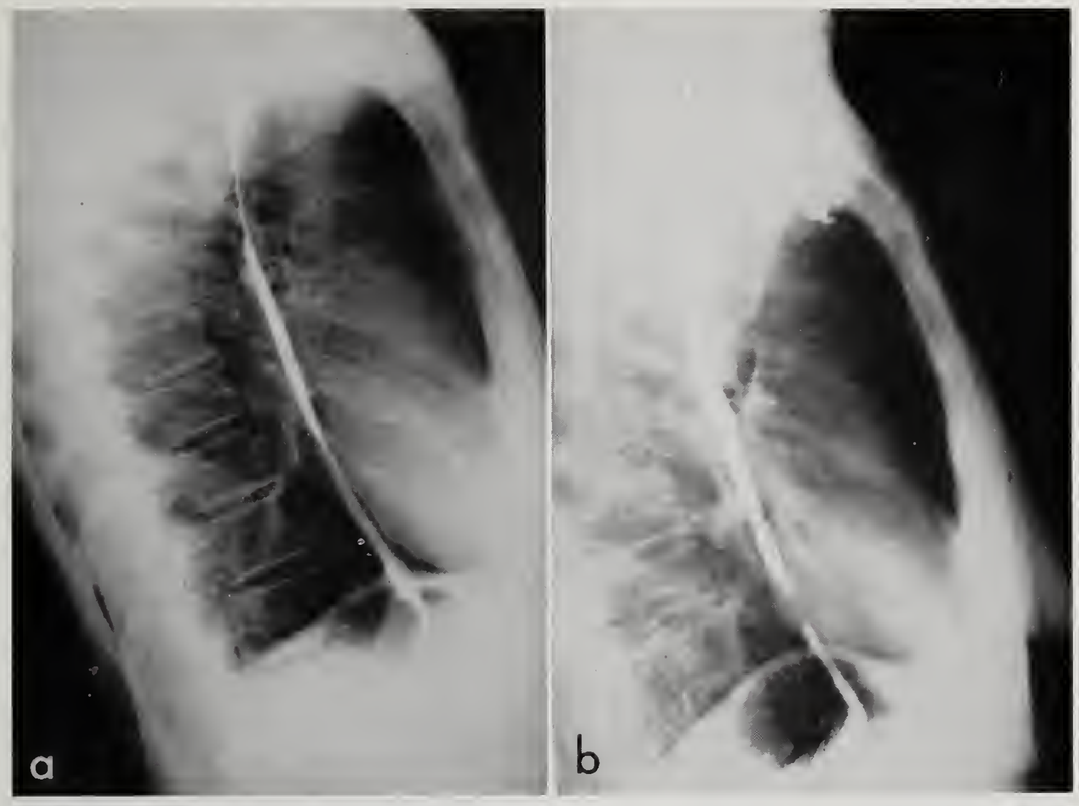


FIG. 3. (a) Barium swallow, patient no. 2, prior to initiation of course of dilations; (b) barium swallow after dilations.

agitis in 10 days to permit safe dilation. This was undertaken with the Eder-Peustow equipment (figure 2-b) which employs a wire with a flexible spring tip. Passed through the stricture, it serves as a leader for the dilators which are introduced over it. It is thus not necessary to leave a swallowed string in place, the wire being easily introduced each day and progressively larger bougies passed over it. There was steady improvement in the patient's swallowing function, and she regained lost weight and vigor. As with the previous patient, maintenance of lumen by self-dilation was necessary. After being instructed in its use, she was discharged to pass a 54 Fr. Hurst mercury-weighted bougie (figure 2-c) 2 or 3 times weekly.

Case 3. A 57-year-old retired Army officer was found to have squamous-cell carcinoma of the esophagus just proximal to the aortic arch. Because of its high location, this tumor was not considered resectable. Radiation therapy (6,000 roentgens) afforded temporary relief of the dysphagia. After 3 months, however, the symptoms recurred and progressed rapidly until only liquids were tolerated. Esophagoscopy and biopsy then revealed recurrence of the malignant lesion. The patient had already received the maximum permissible dose of radiation, and therefore dilations with the Eder-Peustow dilators were undertaken. When a 40 Fr. olive could be passed with ease a polyethylene tube was emplaced over a Hurst 34 Fr. tube, according to the technique devised by Palmer and Boyce[1] (figures 4-a and 4-b). Six months later the patient developed evidence of local and distant metastases of his tumor, but the esophageal lumen remained open, and he has been spared the inevitable complete closure of his esophagus.

Discussion

These 3 patients, chosen from over 50 with similar problems, demonstrate what can be accomplished by careful but persistent and vigorous transoral manipulation.

Surgery should not be necessary in most instances of esophageal stenosis, and certainly a trial of transoral dilation should be undertaken before considering an esophageal resection or permanent gastrostomy. This approach is particularly useful in benign strictures following corrosive burns or chronic esophagitis, and in cases of esophageal carcinoma above the aortic arch. Surgery is the approach of choice for malignant tumor below the aortic arch, although transoral manipulation can be very helpful when a lesion in that location proves to be nonresectable or the patient's general condition prohibits surgery.[2] Occasionally the location and tortuosity

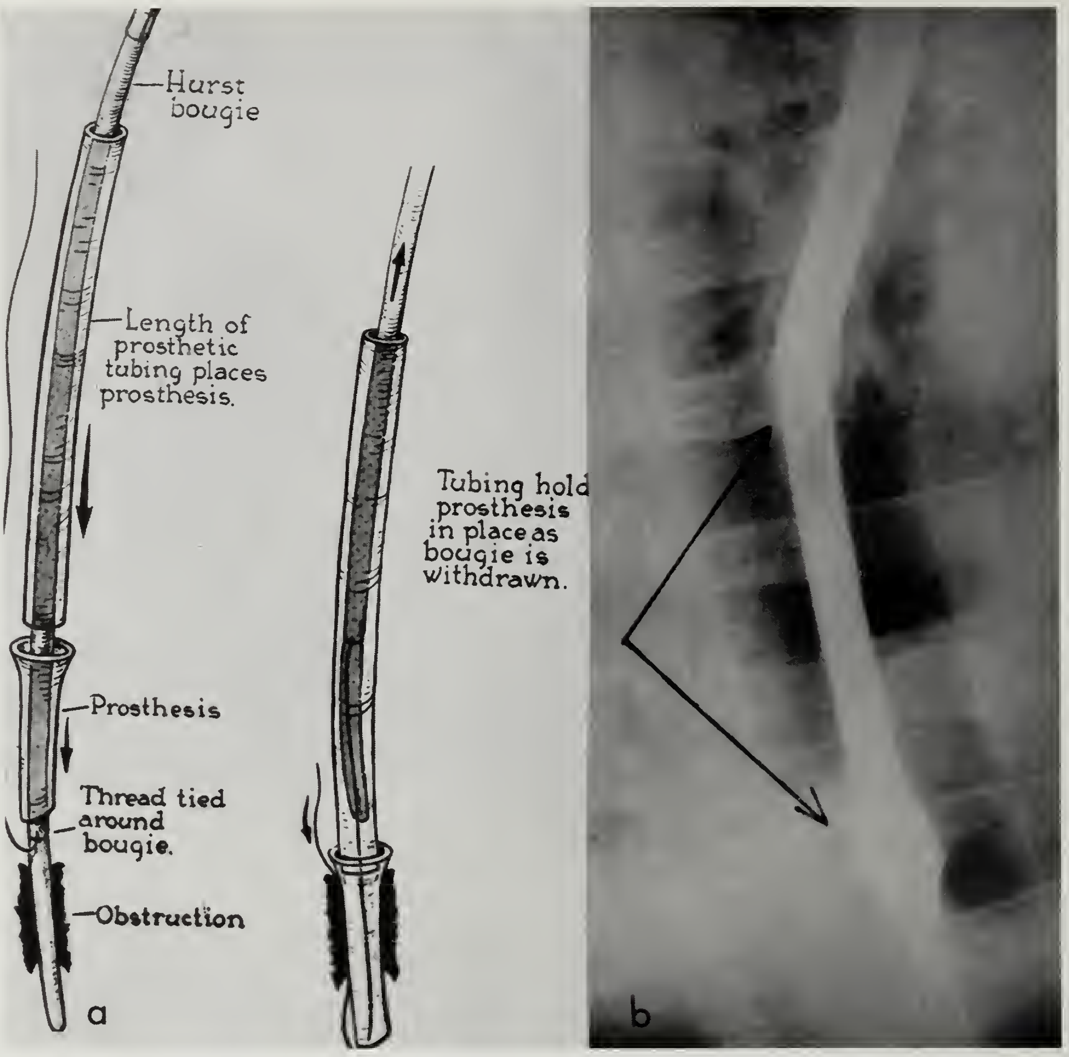

Hurst bougie
Length of prosthetic tubing places prosthesis.
Prosthesis
Thread tied around bougie.
Obstruction
a
Tubing hold prosthesis in place as bougie is withdrawn.
b

FIG. 4. (a) Technique of placing a molded polyethylene prosthetic tube through a stenosing esophageal lesion (from Palmer and Boyce,[1] page 135); (b) barium swallow, patient no. 3, following placement of polyethylene tube through esophageal carcinoma.

of a stricture are such that dilation from above is not possible. In that event retrograde dilations may be used. This requires a temporary gastrostomy and at the time of operation placement of a string which is left in place in the esophagus. Special dilators, passed over the string from below, are utilized until the lumen is enlarged sufficiently to permit dilation from above.

The management of esophageal stenosis by any of these methods requires the services of a competent endoscopist. Most medical centers have such a specialist on their staffs, and they should be consulted before proceeding to more radical methods of treatment.

Summary

Esophageal stenosis, whether due to benign stricture or malignant tumor, can usually be managed satisfactorily by transoral dilations, obviating the need for esophageal resection or gastrostomy. The 3 patients presented demonstrate some of the techniques which are available.

References

1. Palmer, E. D., and Boyce, H. W.: Manual of Gastrointestinal Endoscopy. Baltimore: Williams & Wilkins, 1964, pp. 33–5.
2. Menguy, R.: Role of bougienage in palliative management of esophageal cancer. Surg. Gynec. Obstet., 1964, **119**, 849.

Meningococcal Infections

LT. COLONEL RAYMOND W. BLOHM, JR., MC, USA*

Meningococcal infections are being reported in increasing frequency with a significant increase in the last 2 years compared to the last decade. Cyclic increases of these infections have occurred approximately every 8 to 12 years with a duration of 4 to 6 years (figure 1).

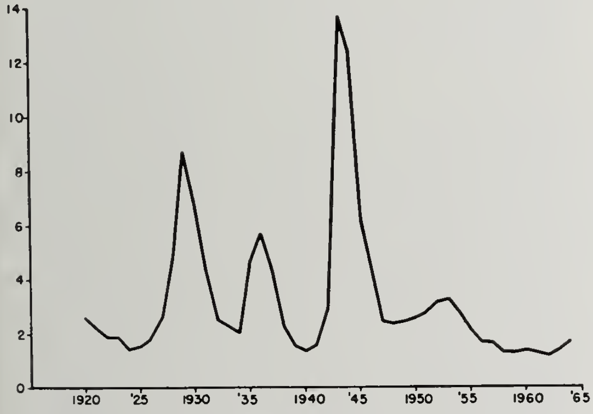


FIG. 1. Meningococcal infections in the United States: annual rate per 100,000, 1920–64.

As well as being cyclic, meningococcal infections, while occurring sporadically the year around, also tend to be largely seasonal. Increasing incidence of the disease generally begins in the late fall and early winter and extends to late spring. Figure 2 illustrates this seasonal pattern and the increased case rate during the winter and spring of 1965. This same seasonal pattern parallels most bacterial and viral respiratory infections. In certain geographical areas less distinct seasonal changes occur with the climate more continuously cool and humid. Respiratory infections and meningococcal disease if occurring may tend to be a year-round problem.

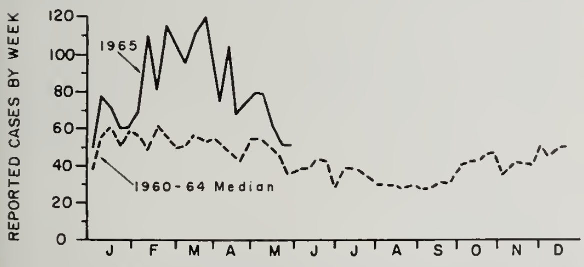


FIG. 2. Meningococcal infections in the United States by week of report: first quarter, 1965 and median, 1960–64.

Meningococcal infections are a civilian as well as a military problem. However, they are particularly prone to occur in unseasoned recruits in basic training camps where an increasing incidence of the disease has been seen during the years 1962 to 1965, starting on the west coast of the United States but soon working eastward. Similarly, increasing numbers of cases have been reported in the last 2 years in the civilian population of all areas of the country. In 1964, 14.3 per cent of all meningococcal infections (2,700 cases reported) were from military installations. In the first quarter of 1965, 1,137 cases were reported with only 7 per cent identified as occurring on military installations.[1] Table 1 illustrates the countrywide increase in meningococcal infections during comparative quarters of 1964 and 1965.

TABLE 1: Meningococcal Infections in the United States, First Quarter, 1964 and 1965

	1965	1964	Per cent Increase
United States	1,137	817	+39
New England	56	25	+124
Middle Atlantic	152	79	+92
East North Central	136	123	+11
West North Central	61	37	+65
South Atlantic	230	172	+34
East South Central	71	71	0
West South Central	179	118	+52
Mountain	52	34	+53
Pacific	200	158	+27

Between cyclic disease occurrences the nasopharyngeal carrier rate seldom exceeds 5 per cent. During outbreaks the carrier rate in any given population usually exceeds 20 per cent. Surveys of military recruits done before arrival or on arrival at military stations have consistently demonstrated over the last 2 years a 15 to 25 per cent nasopharyngeal carrier rate.

The meningococci responsible for outbreaks in the past 2 decades were Serogroup A. The strains of meningococci prevalent for the last 2 to 3 years, both from actual cases and from carriers, have been Serogroups B and C, predominantly Serogroup B. Extensive laboratory studies by the Communicable Disease Center, U. S. Public Health Service, Atlanta, Georgia, and by the Walter Reed Army Institute of Research, Washington, D. C., have shown a wide occurrence and distribution of sulfonamide-resistant Group B meningococci. This is illustrated in table 2 where 1.0 mg. per cent or more of sulfadiazine minimum inhibitory concentration is generally considered to indicate sulfonamide resistance. Even more sobering are the extreme high levels of sulfonamide resistance sometimes demonstrated and the findings that, in addition to sulfadiazine prophylaxis failing when sulfonamide-resistant strains are present, no antibiotic or chemotherapy alternatives have yet proved satisfactory or reliable for mass prophylaxis.[2]

---

* Assistant Chief, Department of Medicine, Walter Reed General Hospital, Washington, D. C. 20012.

TABLE 2: Minimum Inhibitory Concentration (MIC) of Sulfadiazine for 106 Strains of *N. meningitidis* Submitted to CDC During First Quarter, 1965

MIC, mg. per cent Sulfadiazine	No. Strains	Per cent of Strains
0.05	56	52.8
0.10	8	7.6
0.50	9	8.5
1.00	4	3.8
3.00	16	15.1
5.00	5	4.7
10.00	7	6.6
15.00	1	0.9
TOTALS	106	100.0

The recommendations for and against chemoprophylaxis as currently presented by Public Health physicians are often misunderstood. The ratio of actual cases to numbers of carriers is extremely low. There is seldom a known contact source from a known case of disease. Therefore, piecemeal use of chemoprophylaxis through limitation to direct contacts or selected segments of a population serves no useful purpose. Mass chemoprophylaxis is recommended only when sulfonamide-resistant strains are few or absent and then only in the presence of outbreaks within a close community where it is desired to reduce the carrier rate. Control of administration of the drugs, plus medical and laboratory survey supervision, must be available. Indiscriminate use of sulfonamides and other drugs may contribute to the appearance of more drug-resistant strains.[3]

Clinical Manifestations

The following comments and discussions are based on my personal experiences in observing and treating approximately 150 cases of acute meningococcal disease primarily in adult males at Fort Ord, California from 1962 to 1965. The disease runs a gamut from a chronic indolent infection to an acute fulminant and fatal disease, with many variations between the 2 extremes. Chronic infections were not experienced at Fort Ord despite the incidence of acute disease and the high carrier population rate. Accordingly, comments are reserved for acute infections only.

The prodromal period of meningococcemia and meningococcal meningitis is frequently similar to that of other acute infections, particularly those affecting the upper respiratory system. Although some individuals with this disease may profess to upper respiratory symptoms for periods of from several days to several weeks, the majority give a relatively short history of illness. Most patients report cough, sore throat, and headache of 12 to 48 hours' duration, becoming more severe with chills, fever, and myalgias in the few hours prior to admission. As the disease continues to develop the symptoms and clinical course tend to exhibit one of 3 patterns: first, the symptoms and findings of septicemia, meningococcemia; second, the symptoms and signs of meningitis; third, a mixed clinical course of meningococcemia and meningitis combined. The clinical illness can be extremely abrupt and short in duration, with the patient being unable to be awakened in the morning after having retired the night before apparently without gross complaints. Or, the onset may be that of extreme prostration occurring in an individual who had relatively few symptoms a few hours previously. The appearance of rapidly rising fever, headache, and myalgias, which may be extremely severe in the lower extremities and the back, combined with a severe degree of prostration in relation to the duration of the symptoms should make one suspicious of early meningococcal infection.

Infrequently, in the meningococcemia group separate organs or areas may seem to be involved first, and the patient may be admitted because of hot swollen joints or with chest pain and clinically recognizable pericarditis or with delirium and/or convulsions suggesting acute psychiatric disorder or neurological disease. All physicians, therefore, must be familiar with the occasional bizarre picture of this disease and have a strong suspicion of meningococcal infections, particularly when the meningococcus carrier rate is high or the patient is known to have been in an endemic area.

Most patients when first seen are in the prodromal state and not acutely ill. Extreme awareness and suspicion by the physician are necessary to pick up the ensuing physical signs or changes in physical status that would make the diagnosis of meningococcemia or meningitis evident and ensure early therapy. Recent experiences at a basic training post revealed that approximately 70 per cent of clinical cases were admitted to the post hospital during the prodrome of the illness without recognizable rashes or central nervous system findings suggesting meningococcal infection.[4]

Individuals may be brought to the office or hospital by friends, co-workers or family members because of bizarre behavior associated with fever. These individuals will usually show signs of meningismus. Infrequently a patient will enter with the prodrome history as noted previously but with severe prostration and a markedly evident purpuric and hemorrhagic rash scattered diffusely over the body. Signs of shock, cyanosis, and near vasomotor collapse may also be present. The majority of patients seen will not exhibit signs or symptoms of this severity.

As the usual patient with the prodromal symptoms and signs advances into the more obvious clinical infection, the septicemia becomes evident with the appearance of petechiae. In a good light proper and complete and repeated examinations of the skin of any patient with fever or acute illness are necessary to ensure that a less obvious rash or scattered petechiae are not overlooked. These lesions often appear in a few scattered areas, primarily about the axillae, the flanks, the belt line, the inner aspect of the lower legs, and the ankles and feet. Petechiae are also occasionally observable in the mucous membranes of the mouth and in the sclerae and conjunctivae. They do not blanch on pressure. Early, they may be small and infrequent. They may be flat and range from pinkish or salmon color to red. They may be numerous, seemingly occurring in large diffuse showers resembling some acute viral exanthems. Rarely, a transient hive-like reaction may be seen about solitary petechiae for a few hours. As the disease progresses the petechiae will become nodular and have a purple-red and often a frank hemorrhagic or purpuric appearance. They may coalesce, producing areas of frank infarction of small to large areas of skin. The nodular petechiae are a potential source for diagnosis, with the bacteria being found in 50 to 60 per cent of the cases when a petechial incision and gram stain are done properly.

Because of the widespread septicemia, distribution of bacteria, and the tendency for bleeding into important tissues and organs, a variety of symptoms and signs involving individual organs and systems may be presented in the first 24 to 48 hours of illness and must be observed and treated accordingly. Hematemesis and melena with bleeding into the gastrointestinal tract from petechiae or purpura are occasionally seen but are only rarely massive.

When meningitis occurs with the meningococcemia it frequently is present without a noticeable rash even though blood cultures are usually positive. After the prodrome the patient with meningitis usually complains more of headache and frequently has nausea and vomiting. The majority tend to become gradually more lethargic and less responsive to stimulation and may lapse into coma. Nuchal rigidity and some disorientation may occur early. Infrequently, as meningitis develops the patient will become acutely disoriented and delirious. One should be aware of this in patients having meningitis, and this diagnosis must always be entertained in an endemic meningococcal disease area.

The clinical course of the untreated patients, primarily those with the meningococcemia type, is characterized by hypotension, which may deteriorate rapidly into vasomotor collapse and shock. The presence of myocarditis has probably not been given enough attention in past epidemics. It is not unusual for these patients to have arrhythmias, electrocardiographic evidence of myocardial injury, and evidence of decreased cardiac output. Acute tubular necrosis of the kidneys may occur as a result of hypotension. Vasopressor drugs may be required to maintain the patient's blood pressure, and it may take several days after apparent good response to therapy for the patient's homeostatic mechanism to recover so that vasopressor agents are no longer required.

The meningitis patient or the meningococcemia patient who subsequently develops signs of meningitis may show signs of increasing intracranial pressure with the appearance of papilledema, coma, occasional hyperthermia, and convulsions and may have sudden and severe vomiting. With significantly increased intracranial pressure the blood pressure rises and the pulse rate slows. With further progression of encephalopathy, the normal respiratory rhythm is disturbed with Cheyne-

Stokes respirations or short periods of apnea. Involvement of the fourth and sixth cranial nerves is occasionally apparent with deviation of the eyes. This is transient, occurring usually during the first 48 hours of illness.

Laboratory Diagnosis

The clinical diagnosis should be suggested by a good history, a complete physical examination, and a high index of suspicion. Routine laboratory procedures may give valuable assistance. The white blood cell count initially is generally over 20,000 per cu. mm. with a marked left shift in the differential. This elevation may be evident before a rash or meningismus and should be a clue that something unusual is occurring. However, this is not always the rule since a patient admitted in the prodrome of the disease may have a relatively normal white blood cell count which within several hours may develop into a marked leukocytosis. Occasionally gram stains done directly on blood smears and on buffy coats of the peripheral blood may show the organisms and give rapid confirmation of the diagnosis. Urinalysis may show both red and white blood cells.

Extreme care must be taken in all culture procedures to promote growth of the organisms, which are very fastidious in their growth requirements and characteristics. Materials to be cultured should not be exposed to unusual cold, heat, or drying. In this regard, the sterile culture media should not be cold when the blood is injected into it for culture. Throat cultures in suspected cases should be accomplished by transference of the swab material from the back of the nasopharynx to a blood agar culture plate which is incubated under conditions that favor growth of the meningococcus. Blood cultures should be done immediately upon the slightest suspicion of meningococcal infection. Positive cultures usually show growth within 12 to 24 hours if the material is cultured and incubated properly. Growth may be grossly evident or demonstrated by gram stain of material drawn under sterile precautions from the blood culture media. Subculturing thereafter on a chocolate or blood agar plate and incubating under decreased oxygen tension will also readily demonstrate growth. On examining smears from the specimens withdrawn from the blood culture media one must be extremely cautious in interpretation because of the presence of nucleated erythrocyte material which may resemble meningococci.

Spinal fluid, depending on the stage of meningitis, may range from relatively clear to grossly cloudy, with white blood cells ranging from a few to many thousands per ml. When the cell count is under 10 in the face of definite signs of meningismus it is recommended that the spinal tap be repeated in 2 to 4 hours because it will probably contain more cells and provide a better opportunity for obtaining a positive culture or smear. A careful search with the gram stain of the spinal fluid sediment frequently will reveal extracellular and intracellular gram-negative diplococci, confirming the diagnosis. Contrary to popular belief, extracellular diplococci are occasionally seen on gram stains of spinal fluid which is clear and has no or few white blood cells in the specimen. Gram stains are, therefore, indicated on all spinal fluids obtained with a suspicion of meningitis. Nevertheless, in the absence of bacteria on gram stain and in the face of a peripheral blood leukocytosis and the presence of many leukocytes in the spinal fluid meningococcal meningitis should be suspected more than any other infection and therapy initiated while culture confirmation is being awaited.

The spinal fluid protein is elevated, and the spinal fluid glucose is usually low. However, in a recent series of many meningitis cases the spinal fluid sugar was found to be occasionally normal or only minimally diminished in the presence of gross meningitis.[4] A blood glucose should be drawn at the same time as the blood culture and prior to starting intravenous fluids to determine if there may be hyperglycemia which may occur in some central nervous system infections and injuries and which then might explain a "normal" spinal fluid glucose.

The bacterial colonies on the blood plates usually appear as moist, mucoid-appearing, shiny colonies. Confirmation of *Neisseria meningitides* is accomplished with the use of oxidase, which turns the culture colonies black, and by sugar fermentation reactions. Typing of the meningococcus is important and can be done with commercially available typing sera. Disc sensitivity techniques may give some indication of sensitivity to the various drugs but not the amount of drug resistance. Quantitative drug sensitivity studies can be accomplished at most centers and at state or other public health laboratories.

Skin petechiae, particularly of the palpable and nodular type, may be examined for meningococci, being positive on gram stains in over 60 per cent of the cases if done properly. However, long and careful searching of the petechial smears may be required to find the organism. It is recommended that a cruciate incision be made over and into the nodule, with the use of local anesthesia if necessary, and with the scalpel point material from the subcutaneous tissue be placed upon the slide, smeared, and gram-stained. This technique is far superior to needle aspiration or a lancet-type scraping. It is particularly useful in early confirmation when a patient has already been started on antibiotics and when appropriate cultures were not obtained prior to the giving of antibiotics.

Prognosis

Older texts comment on this disease with such words as "No other infection so quickly slays." [5] This is still true as shown by recent experiences. The prognosis for life or death is usually evident within the first 24 to 36 hours after the start of treatment. The overwhelming meningococcemia with or without meningitis with the gross purpuric skin lesions and vasomotor collapse fortunately occurs in less than 10 per cent of diagnosed cases, with mortality ranging from 33 to 50 per cent, despite therapy. Recent experiences indicate an overall mortality rate for all types of acute meningococcal infections from 5 to 10 per cent.[4] It is distressing to note that this mortality rate has not improved significantly since the preantibiotic era, and it is essentially the same as recorded with therapy with antiserum and sulfonamide drugs. The mortality in isolated cases in nonendemic areas or periods is usually higher due to a failure of early diagnosis and treatment.

The most important factors in improving the prognosis are early diagnosis and institution of appropriate therapy. However, even then a rapidly progressive downhill course and death may occur. The majority of deaths are usually cerebral in character with increasing intracranial pressure, hypertension with bradycardia, hyperthermia, convulsions, changes in respiratory rate and rhythm, and, finally, the poorest prognostic physical sign of all, acute dilatation of one or both pupils with no reaction to light.

The complications in patients surviving the initial infection are generally few, and the patient recovers almost entirely without sequelae. Diplopia is a common symptom during recovery. Sixth cranial nerve palsy is frequent but transient, rarely lasting over 1 to 2 weeks. Hearing loss, referred to as common in old textbooks, has been only rarely noted in recent series of treated patients tested clinically and by audiograms. Myocarditis, heart failure, and cardiac arrhythmias are more common and serious than suspected and may complicate recovery.[6] A narrow pulse pressure is often evident in such cases. Cases of sudden death on the fourth or fifth day after treatment in a patient who has been doing well may be due to myocarditis causing an acute arrhythmia. Infrequently, an organic brain syndrome resembling an acute schizophrenic or regressive state may be noted following otherwise successful treatment. This state is usually temporary but may last months before resolving. Diabetes insipidus and partial blindness have also been noted as infrequent complications.

Treatment

Penicillin G is the drug of choice in those patients without known penicillin allergy. In all cases in which meningococcal infection is suspected it is recommended that the initial loading dose be given intravenously and administered immediately after the appropriate cultures have been taken. One million units of aqueous crystalline penicillin diluted in 30 to 50 c.c. of fluid is injected intravenously slowly over a 10-minute period. This loading dose then permits one to insert an intravenous plastic catheter well up into a large vein either percutaneously or by a cutdown. For as long as the patient's condition demands it 1 million units of aqueous crystalline penicillin over a 10-minute period is given hourly to the patient in the intravenous fluids which are given. The patient, therefore, receives 24 million units of penicillin each 24 hours. This should be continued until the patient's condition has stabilized and he has been afebrile at least 24 to 48 hours. The second choice of management with penicillin following the initial intravenous loading dose is 1 million units every 2 hours intramuscularly. This route should not be used in patients with hypotension, shock, or a suggestion of vasomotor collapse and is generally not recommended.

In penicillin-allergic patients the alternate choice in antibiotic therapy is either Chloromycetin®, 4.0 Gm., or tetracycline, 2.0 Gm., given daily. Initially the maximum allowable intravenous dose is given rapidly. Oral administration of these drugs may be used when danger of shock has passed and the patient is afebrile for 24 to 48 hours.

Sulfonamide compounds may be used to supplement penicillin or other antibiotics when the patient is not allergic to sulfonamides and the sensitivity of the meningococcus is unknown. Sulfonamides should not be used alone but only in combination with other antibiotics, since resistances to previously effective therapeutic blood levels have been documented.

Following response to intravenous therapy and after being afebrile at least 48 hours, the patient may be switched to intramuscular penicillin if penicillin has been the therapeutic agent. The dosage then is 600,000 units of aqueous procaine penicillin every 6 to 8 hours for completion of 10 days of therapy. Broad-spectrum antibiotic and sulfonamide dosage may also be diminished as above and given orally for a completion of 10 days of therapy. The dosages are all in reference to normal adults and should be reduced proportionally, by weight, for children.

In all cases fluid balance and electrolyte balance must be carefully checked with frequent electrolyte and blood chemistries done daily when indicated. This is particularly important in those patients with meningitis who commonly have diuresis on the second and third day of illness.

The avoidance of prolonged hypotension and shock cannot be overstressed. If shock occurs it must be rapidly corrected to prevent renal damage. The giving of ample intravenous fluids governed by urinary output and sufficient to maintain adequate blood volume is important. Vasopressor agents should be used quickly and as long as necessary to sustain the blood pressure near normotensive levels. Occasionally it is necessary to use vasopressor agents for prolonged periods.

The use of corticosteroids in the treatment of meningococcemia and meningitis is debatable except that everyone appears to agree that in the acute severe case with shock, severe purpura, and severe toxemia it should be given intravenously. Hydrocortisone in dosage of 100 mg. intravenously by slow drip over 6 to 8 hours is the usual manner of therapy, although there are some who advocate much higher dosages. It has also been demonstrated that the addition of smaller dosages of steroids intravenously may be as rewarding in correcting early mild hypotension in the patient with early meningococcemia as vasopressor agents.

In those patients with cardiovascular collapse and evidence of myocarditis careful cardiac management including the use of digitalis or other drugs in control of failure, arrhythmias, etc., should be followed. Occasionally corticosteroids in small dosages may resolve arrhythmias that are not responding to usual measures of therapy.

Rapidly advancing intracranial pressure with severe hypertension, papilledema and vomiting may occasionally demand the use of intravenous urea, mannitol, or other compounds having the ability to decrease intracranial pressure. This at times has appeared to be lifesaving, but generally can be expected only to buy time and to give several hours of decreased pressure. It usually cannot be repeated without hazards or without the possibility of rebound and increasing cerebral edema.

Patients with this disease may seem to recover quite rapidly, but ambulation and activity should be restricted through the first 10 days of illness and until antibiotics have been discontinued for several days. Adherence to this principle may prevent the occasional sudden unexpected death from myocarditis and arrhythmia when the patient has otherwise been doing well. After several more weeks with gradually increasing activity, and providing there are no residual complications, full activity can usually be resumed.

Summary

Meningococcal disease incidence has increased, and the carrier rate has been high over the last 3 years. The appearance of sulfonamide-resistant strains has complicated mass prophylaxis. No longer can sulfonamides be used alone in the treatment of meningococcal disease without doubt of its efficacy. Early diagnosis and therapy are stressed in avoidance of complications and overwhelming disease. I have described the most common as well as many of the variant symptoms and signs from the prodrome into the obvious disease state based on my observations of outbreak in a military community. Diagnostic alertness and awareness of the epidemiology in the community, plus prompt and proper therapy, will contribute to a good prognosis and a low mortality rate.

References

1. Morbidity and Mortality, Weekly Report. Atlanta, Ga.: Communicable Disease Division (USPHS), 1965, **14**, no. 14 (April 10).
2. Eickhoff, T. C., and Finland, M.: Changing susceptibility of meningococci to antimicrobial agents. New Eng. J. Med., 1965, **272**, 395.
3. Gordon, J. E., edited by: Control of Communicable Diseases in Man, 10th ed. Publication of American Public Health Association. Philadelphia: Lea, 1965.
4. Fort Ord, Calif.: Unpublished data, 1962-64.
5. Herrick, W. W.: Extrameningeal meningococcus infections. Arch. Int. Med. (Chicago), 1919, **33**, 409; cited in Boyd, W., edited by: Textbook of Pathology, 4th ed. Philadelphia: Lea, 1945.
6. Blumberg, J. M., Brig. Gen., MC, USA, Director, Armed Forces Institute of Pathology: Personal correspondence.

PRESIDENT'S PAGE

THE ADVENT OF MEDICARE

Public Law 89-97, of which Title XVIII is popularly known as Medicare, becomes operative July 1, 1966. Inasmuch as there is a great deal of misinformation as well as a lack of information concerning the details of this law, it behooves all of us to familiarize ourselves with its details.

On July 1, 1966, over 17 million Americans who have reached the age of 65 become immediately eligible for the hospital care benefits embraced by this legislation. However, to establish one's eligibility, it is necessary to register at the local Social Security office if the individual is not receiving Social Security or Railroad Retirement Benefits. If a beneficiary does not register by March 31, 1966, the next opportunity that the individual will have to do this is on October 1, 1967, in which event coverage does not begin until 6 months later. Therefore, it is obvious that we should advise our patients of this registration requirement and point out the need of early registration. Furthermore, I think it is essential that we acquaint our patients with the fact that this is not an entirely free service. The patient must pay the first $40 of hospital expenses, and after 60 days of hospitalization for any one "spell of illness" the patient pays $10 a day toward the hospital bill for the subsequent 30 days, benefits terminating after 90 days. In addition the patient is eligible for outpatient diagnostic tests, but he is required to pay the first $20 of such expenses. Home care consisting of visits from nurses, physiotherapists, and other paramedical personnel is provided after hospitalization of at least 3 days.

In addition to these hospital benefits provided under Part A, Part B provides supplementary medical benefits for a monthly insurance payment of $3. At the present time, approximately 70 per cent of those eligible for Part B have already signed up. These benefits include the usual physician's and surgeon's services, ambulance service, diagnostic, X-ray, laboratory and other tests as well as X-ray therapy. However, these benefits become operative only after the patient pays the physician the first $50 of expense, and they cover only 80 per cent of the remaining "reasonable" charges.

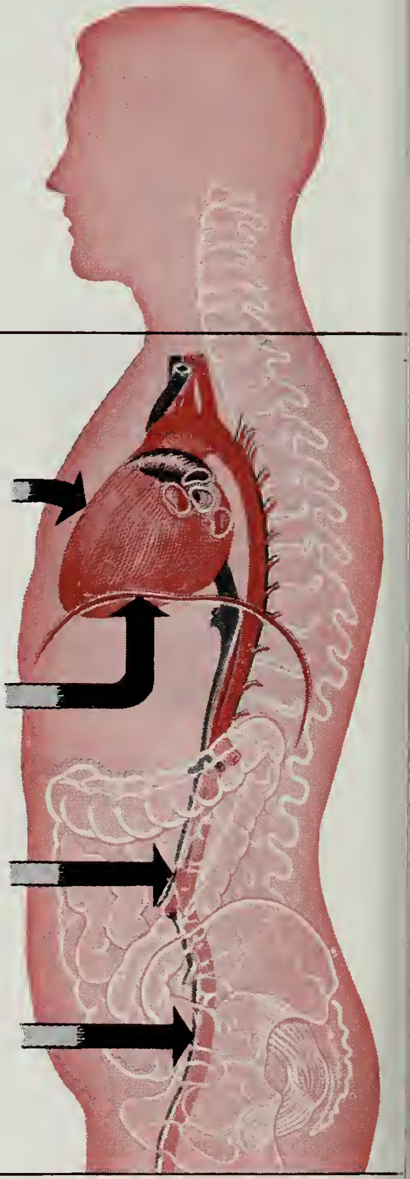
On January 1, 1967, the extended care facility benefits provided by eligible nursing homes and similar institutions will begin. This is intended to provide intermediary care after the acute hospital phase ceases. To be eligible an individual must have been provided 3 days of hospitalization, and the benefits extend for 20 days. For another period of 80 days residence in the extended care facility is available, with the patient paying $5 a day.

While there will undoubtedly be a monumental traffic jam in hospitals on and shortly after July 1, 1966, it is hoped that as we learn to live with these rulings and when the extended care facility benefits become available on January 1, 1967, the public will be able to continue to benefit by the high medical standards previously provided them.

Robert J Coffey

In Cardiovascular

Increased intrathoracic and intra-abdominal pressure from straining



METAMUCIL®
brand of psyllium hydrophilic mucilloid

Metamucil Powder: 4, 8 and 16-ounce containers. Instant Mix Metamucil: cartons of 16 and 30 single-dose packets.

Patients—

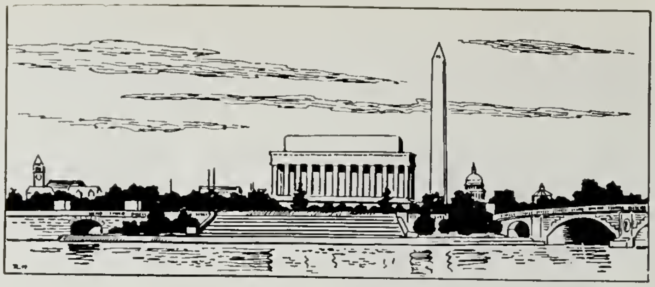
Metamucil

...to prevent straining at stool
and its adverse effect on
blood pressure,
cardiac output and
pulmonary circulation.

Average Adult Dosage:
One rounded teaspoonful of Metamucil (or one packet of Instant Mix Metamucil) in a glass of cool liquid one to three times daily.

SEARLE

Research in the Service of Medicine



EDITORIALS

Let Us Persevere in Fight Against Cancer

THE FIGHT AGAINST CANCER increasingly permits man to turn from despair to hope. The advances made by cancer research now provide an ability, with early diagnosis, to cure half of this year's cancer cases. We can move ever closer to complete victory over cancer. Plainly the task for today and tomorrow is to persevere with our programs of research, education and service.

Cancer researchers are addressing themselves to such questions as:

Why do some individuals get cancer while others do not?

How are the hormones of the body related to cancer?

Is there any immune mechanism against cancer?

How do cancer cells differ from normal cells?

The effort of cancer researchers to find the interconnectedness of natural phenomena, their underlying laws, recalls Tennyson's lines:

"Flower in the crannied wall,
I pluck you out of the crannies,
I hold you here, root and all, in my hand,
Little flower—but if I could understand
What you are, root and all, and all in all,
I should know what God and man is."

Until the ultimate answers for cancer are found, the role of the volunteer is magnified. Above all, through the service program of the Cancer Society the volunteer brings to cancer patients assurances that people care, that help is at hand. Andromache's exclamation, in the play of Euripides, "And none to pity thee!" is cancelled out by the compassionate work of the cancer service.

The wide range of activities provided by the American Cancer Society is due mainly to the public's generous contributions made each April—Cancer Control Month. Let us persevere.

LEONARD J. EMMERGLICK
President, American Cancer Society,
District of Columbia Division, Inc.

Infants and Children and Tuberculosis Skin-testing

A RECENT COMMUNICATION of a Joint Committee of the American Academy of Pediatrics and the American College of Physicians strongly recommends that all children between the ages of 6 and 12 months be tested for tuberculosis. Skin tests should be given before the child has been vaccinated against measles or smallpox.

The recent report in Washington newspapers of 8 small District children who contracted active pulmonary tuberculosis from a baby-sitter serves to spotlight that this is not a disease of the past but indeed is one that is constantly with us.

The Joint Committee emphasizes that the prevalence of this disease demands that testing for tuberculosis should be repeated annually up to 4 years of age, and thereafter no less than every 2 years, depending upon the risk of exposure of the child and the prevalence of tuberculosis in the population group. And the risk in our Washington population group appears to be considerable.

In a report prepared by Dr. Ian D. McLaren, Tuberculosis Control Office of the D. C. Department of Public Health, provisional figures indicate that Washington, D. C. has reported the

Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of the Medical Society of the District of Columbia

greatest increase in active cases of 54 selected cities of 250,000 population for the past several years (table 1).

TABLE 1: New Active Tuberculosis Cases, 1959–1964

Calendar Year	New Active Cases	D. C. Case Rate per 100,000	National Case Rate per 100,000
1959	618	80.9	32.5
1960	478	62.6	30.8
1961	509	66.6	29.4
1962	599	75.9	28.7
1963	474	60.6	28.7
1964	503	62.6	26.3

The preliminary figures for 1965 indicate that the total will exceed 1964. The necessity for early and frequent skin-testing is apparent as is the need for all physicians, not just pediatricians, but also obstetricians, general practitioners, and public health officers, to join in a Nation-wide endeavor to protect children against the hazards of this debilitating and deadly disease.

The development of effective methods of treatment that help prevent meningeal complications in childhood makes early detection of paramount importance.

Certainly, consistent and early testing would promise to eliminate tuberculosis as a constant threat, and these procedures are available for use. To this end the following statements were made:

1. The Mantoux test is the most accurate measure of tuberculin sensitivity. Intermediate P.P.D. (5 T.U.) is the standard dose.
2. For clinical screening, multiple puncture test (Tine) is satisfactory, but doubtful reactions should be checked by Mantoux testing.
3. Tuberculin patch tests are no longer recommended.
4. P.P.D. when diluted in quantities of 50 doses or more may be stored for periods up to 6 months without significant loss of potency provided the material is kept refrigerated, sterile, and away from sunlight.

Diligent compliance with these recommendations of the American Academy of Pediatrics and the American College of Chest Physicians, to initiate tuberculin skin-testing early in the first year of life, repeating the test in the preschool years, would help stem the rising incidence of a preventable disease that should have disappeared years ago.

F. G. B.

The Healing Team—Myth or Reality?

THE INTERRELATEDNESS of the healing arts and religion has a long history. Mosaic law contained both the essence of the Jewish religion and an impressive system of pre-Hippocratic thought. It has been pointed out that the Jews could not have wandered 40 years without a public leader of genius.

Enthusiastic response to encouragement of closer physician-clergyman relationships on patient care has brought about a recent expansion of the American Medical Association's Department of Medicine and Religion. In addition to encouraging the doctor and the pastor to work together, the Department, through articles, visual aides, and other means of communication, points up the concept of "the whole man," i.e., the individual's total health needs, physical, mental and spiritual. Plato taught this concept when he wrote: "... for the part can never be well unless the whole is well. For all good and evil, whether in the body or in human nature, originates in the soul.... For this is the great error of our day in the treatment of the human body, that physicians separate the soul from the body." Still controversial is the current trend in medical education to slip the "Flexnerian knot" and institute a radically new medical school curriculum designed to fit the physician's needs of today in dealing adequately with the "whole man."

That encouragement is still needed is an indication of the difficulties that have beset this relationship over the centuries. While, increasingly, ministers are finding teaching positions in medical schools, and, more and more, coöperation between physician and minister is becoming the rule, this is not to say that the prejudices inherent in human nature have been eradicated. As Dr. C. Knight Aldrich and the Reverend Carl A. Nighswonger pointed out in the recent Davidson Memorial Lecture, confusion as to role, consternation at what often appears to be thoughtless, indiscreet handling, and condescension that results from the arrogance of low self-esteem frequently make a myth of the concept of the healing team. Paul Tillich has said there is no basic conflict between the science of medicine and religion but that conflicts arise when the physician, in his

THE FIFTH ANNUAL DAVIDSON LECTURE ON RELIGION AND MEDICINE was held in the Gorman Auditorium of Georgetown University Hospital, January 10, under the auspices of the District Medical Society's Committee on Liaison with the Clergy. Dr. Robert J. Wetmore (left), Chairman of the Committee, and Dr. Robert J. Coffey (right), President of the Medical Society, are greeting the guest speakers, The Reverend Carl A. Nighswonger, Director of the Department of Religion and Health of the Greater Dallas (Texas) Council of Churches, and Dr. C. Knight Aldrich, Professor of Psychiatry at the University of Chicago. The subject discussed at this year's Lecture was "The Myth of the Healing Team."

practice, makes personal judgments on the edges of medical science which are not really scientific. When these ideas and decisions are poor theology, the theologian must protest. And while the clergyman is safe within the sphere of religion, he finds himself in trouble when he extends his function into medical areas. Surprisingly, he adds, "Of the two dangers this latter one is the more prevalent in our time."

What, then, is required for the coöperation and collaboration between physician and minister? Are the requirements different from those needed in healthy physician-to-physician and friend-to-friend relationships? I think not. Cooperation and collaboration require good mental health and an unfeigned realism about the world and about oneself, free from the distorting influences of one's past. Maturing involves rediscovering affectively the clichés one knows intellectually. "Physician, heal thyself" applies not only to the physician but to anyone who wishes to equip himself for the experience of coöperating. It takes courage to look inward at one's defenses against frustrations, anger, anxiety and grief. As the parent tries to help the child mature, he finds that until he has solved such dilemmas for himself, he cannot be of much help to the child with the same problem.

This is an era when much publicity is being given mental health. Some awareness of what it is and how it can be achieved becomes especially important for the physician and the clergyman if they are to work together toward their common goal—"total" health for both patients and parishioners.

Robert J. Wetmore, M.D.

Report on the AMA National Symposium on Venereal Disease Control*

This meeting, held at the Drake Hotel, Chicago, November 20, 1965, was an invitational one, attended by some 100-plus physicians, health officers, professors of public health, and laymen who have a special interest in and possess special knowledge of the medical and public health aspects of the control of syphilis and gonorrhea. The purpose of the meeting was to expose the facts regarding veneral disease in the United States and to spotlight those special factors regarding these 2 diseases which would aid in their eventual control and elimination. The meeting was a part of the American Medical Association's broad campaign to curb the rising incidence of veneral disease, which is worldwide today.

Dr. James H. Sterner, of Rochester, N. Y., Chairman of the AMA Committee on Environmental and Public Health, opened the meeting, and presented Dr. Charles C. Edwards, of Chicago, Director of the AMA Division of Socio-Economic Activities, who made a welcoming address to the delegates and attendants. Dr. Aaron W. Christensen, of Washington, Assistant Surgeon General of the Public Health Service, made an address in which he pointed out that syphilis had gone from an all-time high of 75.6 cases per 100,000 population in 1947 down to a low of 3.8 per 100,000 in 1957, but that since then the rate has been climbing again until it was up to 12.1 in 1964 and is still climbing. He pointed out that there is no such thing as almost complete victory over venereal disease, that so long as 1 case goes untreated and 1 contact not identified, there is still the possibility of transmission of infection. The only complete program is one of complete eradication, which he felt is a feasible goal. He emphasized the obligation of physicians to see that every case be promptly reported to responsible public health authorities and that every person who had intimate contact with the infected person be examined, and treated if necessary. He stated that less than 12 per cent of infected cases seen in private practice are now reported, that clinics and hospitals are not much better. He emphasized that in untreated syphilis 1 patient in 15 will develop heart trouble, 1 in 25 will be crippled, 1 in 50 will have to be put in a mental institution, and 1 in 200 will become blind, and that there are 3,000 reported deaths yearly due to syphilis.

Dr. Christensen also emphasized that case-finding and the contact interview are our main weapons, and that we must use them.

I might say, parenthetically, that this emphasis on case-finding and physician-reporting and on the contact interview ran as a theme throughout the entire conference.

In our defense against these 2 diseases the focus was on the physician as the key individual through his reporting of infectious cases. Dr. William L. Fleming, Chairman of the Venereal Disease Committee of the American Social Health Association, another speaker, went further in stating, "It is only the private physician who can eradicate syphilis and gonorrhea." Also, he said, "The private physician holds the key to venereal disease control." He gave further emphasis to the factor of physician-reporting and stated that about 9 out of 10 cases of infectious syphilis and gonorrhea are not reported.

Other speakers at the conference were: Dr. Bruce Webster, Associate Clinical Professor of Medicine of the Cornell University Medical College; Dr. William J. Brown, of Atlanta, Chief of the Venereal Disease Branch of the Public Health Service's Communicable Disease Center; Dr. Sidney Olansky, Professor of Medicine (Dermatology) of Emory University School of Medicine; Dr. Arthur C. Curtis, Professor and Head of the Department of Dermatology of the University of Michigan Medical School, and President of the American Venereal Disease Association; Dr. Fred V. Hein, of Chicago, Director of the AMA Department of Community Health and Health Education; Dr. Joseph L. Logan, a practicing physician from Warren, Ohio; George E. Hall, J. D., of the AMA Law Department; Dr. Amos N. Johnson, of Garland, N. C., President of the American Academy of General Practice; and Dr. Otto Ravenholt, Health Officer for Clark County, with offices in Las Vegas, Nevada.

Closing speakers emphasized the need for greater professional education efforts; for increased epidemiology and case-finding in syphilis; the urgent need for increased research methods to improve diagnosis for gonorrhea, especially for the female; for further research into the immunology of syphilis; and the need for the development of a vaccine for syphilis. More social research is also needed.

In the final summary, Dr. Granville W. Larimore, of Albany, N. Y., a member of the AMA

---

* Editor's note: Dr. Kenney represented the Medical Society of the District of Columbia at this Symposium.

Taking an ECG?
Complete the clinical picture
with **a heart sound recording**

... made on your 500 VISO when you take the ECG

Increase your knowledge of cardiac condition with the valuable *additional* information provided by heart *sound* recordings. With this new Sanborn Heart Sound Amplifier clipped to the front of your 500 VISO* you can immediately obtain clear, sharply defined, graphic records — which identify the *location, intensity* and *duration* of the sounds and murmurs within the cardiac cycle. Even in the presence of complex arrythmias, marked tachycardias and other conditions which may complicate or prevent accurate auscultation by stethoscope alone, a definitive record of diagnostic quality can be obtained with this new instrument. Frequency cutoffs of 50, 100, 250 and 500 cps can be switch-selected to separate murmurs which might otherwise be masked by other heart sounds. As an electronic stethoscope, all sounds from 50 to 2000 cps can be heard at normal or amplified levels.

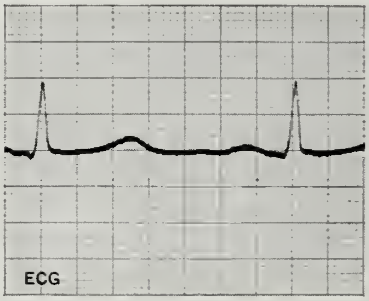
This precise Sanborn amplifier has convenient controls for recording the ECG, PCG, or ECG superimposed on the PCG . . . Cutoff Frequency . . . Audiophone Volume . . . and Sensitivity. Complete with contact microphone, cable and Audiophone (for use as an electronic stethoscope), Model 1506A is $450 f.o.b. Waltham, Mass. (continental U.S.). For more information, use the convenient coupon below. Sanborn Division, Hewlett-Packard Company, Waltham, Mass. 02154. In Europe, Hewlett-Packard S.A., 54 Route des Acacias, Geneva.

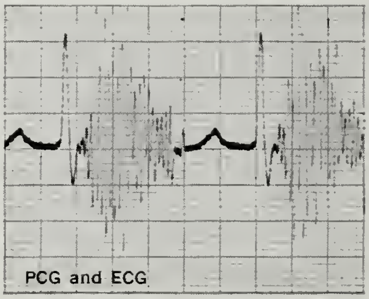
**or almost any other ECG with a 50 mm/sec. chart speed.*

☐ Send detailed specifications on Sanborn 1506A Heart Sound Amplifier.
☐ Have HP/Sanborn Field Office call me for an appointment.

(address) (phone)

4R1 (city) (state) (zip code)





HEWLETT PACKARD hp SANBORN DIVISION

Committee on Environmental and Public Health, stated: "Education is basic to this problem. Health education needs to be improved. We must combat the 'information blackout in sex education.'"

All in all, the conference was a most productive one and should be of significance as we attempt to control VD.

John A. Kenney, Jr., M.D.

PHS Guidelines for Compliance with Title VI of Civil Rights Act

Surgeon General William H. Stewart announced, March 7, specific steps which the Public Health Service has taken to assure compliance in the health and medical fields with Title VI of the Civil Rights Act of 1964.

Currently in the mails to the administrators of the Nation's more than 10,000 hospitals are: (1) letters explaining that to be eligible to receive Federal assistance or to participate in any Federally assisted program a hospital must be in compliance with Title VI; (2) Guidelines for Compliance, and (3) a Medical Facilities Compliance Report which the administrator was asked to complete and return by March 15. An Assurance of Compliance form has also been mailed to approximately 7,000 hospitals which have not as yet filed such forms.

In addition, the Surgeon General announced the establishment in the Public Health Service of an Office of Equal Health Opportunity which is charged with responsibility for the civil rights activities of all agencies of the Executive Branch which administer Federal assistance funds in the health and medical fields.

In his letter to hospital administrators, Dr. Stewart stated in part:

"The Public Health Service has been given the responsibility of ensuring compliance with Title VI in all hospitals receiving funds directly or indirectly from any department or agency of the Federal Government. As a result, hospitals will be dealing with only 1 department of the Federal Government instead of 15. Financial assistance is extended directly by the Federal Government for research, training or construction. In other instances, the funds are for services rendered to clients of state-administered health, welfare or rehabilitation programs.

"This activity of the Public Health Service does not relieve state and local recipients of Federal grants, such as state or local health and welfare agencies, from continuing responsibility for determining that Federally-supported programs do not use noncomplying hospitals."

"Guidelines for Compliance with Title VI of the Civil Rights Act of 1964" is a 2-page general explanation of what is required if a hospital is to be in compliance with Title VI. The document spells out that "hospitals in compliance with the Act are characterized by absence of separation, discrimination or other distinction on the basis of race, color or national origin in any activity carried on in, by or for the institution affecting the care and treatment of patients." It then sets forth the specific characteristics of compliance.

When signing the Assurance of Compliance Form, the authorized hospital official agrees that his institution will comply with the provisions of Title VI and that any necessary measures will be taken immediately to effectuate this agreement.

The Medical Facilities Compliance Report is a questionnaire which asks for specific information on civil rights practices within the hospitals in relation to the admission, care, and treatment of patients, the conduct of training activities, the utilization of staff and the extension of staff privileges.

The hospitals will be asked, for instance, to indicate whether patients are assigned to all rooms and facilities without regard to race, color, or national origin; whether all persons are allowed to use entrances, admission offices, waiting rooms, dining areas and cafeterias, toilets and lavatories, and other service facilities; whether the hospital accepts and approves applications for staff privileges and training without regard to race, color, or national origin; and other similar questions. An up-to-date patient census by race must be indicated on the questionnaire, as must a breakdown by race of physicians holding staff privileges.

If evidence of discriminatory practice is indicated in the returned questionnaire, the specific areas of failure to comply will be pointed out. The hospital will then be given an opportunity to eliminate its discriminatory practices as quickly as possible. Where discrimination persists, the hospital will be excluded from any new Federal assistance programs, such as Health Insurance for the Aged, which begins on July 1. When negotiations fail to achieve compliance, steps will be taken under Title VI to terminate present as-

UNIVERSITY

MEDICAL BUILDING

2143 K STREET, N.W.
OCCUPANCY FALL 1966

ADJACENT TO GEORGE WASHINGTON UNIVERSITY HOSPITAL
SEVERAL CHOICE SUITES AVAILABLE IN WASHINGTON'S NEWEST MEDICAL BUILDING
CUSTOM DESIGNED FOR YOUR REQUIREMENTS

SHANNON·&·LUCHS
Realtors Since 1906

900 SEVENTEENTH STREET, N.W.

CALL MR. MORRISON
296-2345

sistance, or compliance will be secured through enforcement by the courts.

The Office of Equal Health Opportunity is administratively located in the Office of the Surgeon General and will be headed by Mr. Robert M. Nash. Mr. Nash, who has directed civil rights activities of the Public Health Service in the overall framework of the Department of Health, Education, and Welfare, received his Master's degree in social service administration in 1941 from the University of Chicago. In 1946 he joined the PHS as a Hospital Program Representative, and has since served as Deputy Chief, and later Chief, of Grants Management in the Bureau of State Services. In 1964 he was named Assistant Grants Policy Officer in the Office of the Surgeon General, with primary responsibility for health program grants and Federal-State relations in regard to PHS grants.

Section on Ophthalmology of the D. C. Medical Society

Resolutions Adopted December 7, 1965

The Section on Ophthalmology of the D. C. Medical Society met at the Kennedy-Warren on December 7, 1965, with 75 members and guests present. The business meeting was called to order by the Chairman, Dr. Dan G. Albert.

Several resolutions passed at this meeting will be of interest to all members of the D. C. Medical Society.

"*Resolved*, That it is the consensus of the Section on Ophthalmology of the District of Columbia Medical Society that it is the responsibility of the individual ophthalmologist to advise his patients as to opticians and other ancillary services that will, in his professional opinion, best serve the welfare of the patient."

The following statement, adopted by the Guild of Prescription Opticians of America, Inc. at its meeting in Chicago, November 14, 1965, was approved by the Section:

"WHEREAS, Misunderstandings have arisen in connection with the recent Senate hearings on the position of the Guild of Prescription Opticians of America, Inc. regarding the dispensing of eyeglasses by physicians, and

"WHEREAS, There have been attempts to damage the historic close relationship between ophthalmologists and Guild opticians by misrepresentation of its statement on this issue, and

"WHEREAS, The Guild's record is unmistakably clear in its support of medical eyecare as being in the best interest of the public,

"Now therefore, the Board of Directors of the Guild of Prescription Opticians, Inc. adopts the following restatement of its policy:

"We believe that organized medicine at the national and local level should exercise control over any and all practices by individual physicians which bring discredit to the profession. We will support every action which would make Federal legislation unnecessary.

"We recognize that it is in the patient's best interest if an ophthalmologist dispenses eyeglasses in a community where adequate independent optical services are not available or cannot be procured and have so stated in our testimony before the Senate Antitrust and Monopoly Subcommittee.

"We repeat our pledge to encourage skilled opticians to provide independent optical services in these communities if requested by an eye physician.

"We believe it is in the best interest of the public and ophthalmology if licensing of opticians were obtained in all states, and we solicit the active help of ophthalmology and all medicine in securing such laws.

"To make these goals attainable, we believe better lines of communication should be established between medicine and opticianry in order to pursue matters of common interest and concern in an atmosphere of mutual respect. We stand ready to work with any individuals or groups who may be interested in making this possible.

"It is directed that this statement, which conforms to our testimony before the Senate Antitrust and Monopoly Subcommittee on August 5, 1965, be submitted to that Committee and all interested medical organizations."

In discussing this policy statement it was mentioned that 41 per cent of the ophthalmologists throughout the country were dispensing eyeglasses, and the following resolution was proposed and passed:

"*Resolved*, That it is the consensus of the Section on Ophthalmology of the District of Columbia Medical Society that dispensing of eyeglasses (not contact lenses) by ophthalmologists is opposed unless there are no other adequate optical facilities available."

In accord with the above, the following resolution was also adopted: "*Resolved*, That it is the consensus of the Section on Ophthalmology of the District of Columbia Medical Society that the Section is opposed to dispensing eyeglasses (not contact lenses) by ophthalmologists in the Greater Washington Metropolitan Area."

Health Dept. Notes

The Need for New Medical Facilities in D. C.

MOST PHYSICIANS, especially those who have served on their hospital's building committee, will be aware of the many factors which affect construction of new or the expansion of existing treatment facilities.

Funding, of course, is a prime consideration, and one which can often set limits on what might be otherwise extensive plans. There is also the nature of the hospital itself; its roles and purposes; the relative emphasis it may place on patient care, teaching and research; and other largely internal matters which must be resolved before construction commitments can be made.

But there have developed in recent years external considerations which have become increasingly important and which have really prevented hospitals from going their independent ways in building and expansion. The needs of the immediate community and the larger needs of an entire region must now be given thought, or else there will be costly duplication of some services and omission or neglect of others.

This regard for the place of the hospital in the community *vis-à-vis* other hospitals is reflected in a recent study of the D. C. Department of Public Health. The study also demonstrates the changing nature of illness in the population and of methods of treatment and care.

I refer to the 1966 Revision of the Hospital and Medical Facilities Construction Plan for the District of Columbia, a study prepared by this Department under the Federal Government's Hill-Burton Act.

This study indicates that the District needs or will need, by 1970, hospital and nursing-home facilities for a population of 859,000 persons living in the District of Columbia. Consideration must also be given to the requirements of an estimated 2,625,000 persons who may be living in the Washington Metropolitan Area by 1970. The needs of the latter group might be met primarily by construction of facilities in their own areas, but the District must relate its efforts to planning for these nearby areas.

Within the District of Columbia, there will be, in the immediate future, a need for 310 general hospital beds and 720 long-term hospital beds. This is in addition to construction of facilities now in progress, nearing completion, or otherwise known to be available soon.

The study indicates that there is also a District need for 163 beds for the care of patients with tuberculosis. These are intended to replace outmoded facilities at Glenn Dale Hospital. However, new construction is not recommended at this time because present beds seem adequate for continued use over the next few years.

There is also a need to improve some 1,600 beds, in the acute general category, in various hospitals throughout D. C. These beds may be considered substandard because room space is not sufficient, because plumbing is inadequate, or for a variety of other reasons. But there does not seem to be an extreme urgency in this particular matter.

There is urgency, however, in the need for the 310 acute general beds and for the 720 long-term chronic beds mentioned earlier. Any physician who has attempted to admit patients to a general hospital bed or for long-term nursing care is quite familiar with the shortage of these facilities within the District of Columbia.

The need for both of these, particularly the long-term beds, is likely to grow in the months and years ahead, as Medicare benefits permit increased use of hospitals. The older segment of the population subject to chronic illnesses is certain to increase also.

The purpose of the study was to survey hospital bed requirements in D. C. so that funding support from the Hill-Burton Act could be most effectively applied to D. C. needs. Copies of the study, designated the 1966 Revision, are available for reading in the Department of Public Health.

It should be noted that the study was made by Department staff engineers (in terms of space, plumbing, etc.) and by other public health specialists, and that it was prepared through the Public Health Advisory Council's Committee on Medical Care and Hospitals in coöperation with the Hospital Council of the National Capital Area. Hospital representation and participation in the study were dominant considerations.

MURRAY GRANT, M.D., D.P.H.
D. C. Director of Public Health

Cancer Programs Approved by ACS

MORE THAN 900 CANCER PROGRAMS in the U. S. were approved by the American College of Surgeons in 1965, according to the Standards stated in the "Manual for Cancer Programs."

The 2 types of program are (1) clinical activities, and (2) registry.

A clinical activities program may be conducted in a cancer or general hospital, and, in a few instances, in other medical institutions such as named clinics, medical schools, special institutes, sanitoriums, county and local medical societies.

The clinical program must be staffed and equipped to provide for full diagnostic work-up of the patient; and dependent upon the decision of the medical staff and affirmed by the governing board, will provide a consultation service only, or a consultation and treatment service. A cancer registry must be a part of the clinical program.

A registry is the working index of the records of the cancer experience within the hospital or other institution from a specified date. It may be the only organized activity recognized by the College in a given institution. The registry provides the medical staff with data on the hospital's cancer experience, including follow-up and survival studies.

Approval for 3 years is given to the program which fulfills or exceeds the required Standards. Approval for 1 year is given to the program in which the correction of relatively minor deficiencies will result in full conformity with the Standards.

As a matter of policy, programs are surveyed at 3- and 1-year intervals.

This project is conducted by the College in part under grants-in-aid from the American Cancer Society and the Public Health Service.

Included in the approved list from the District of Columbia are the following hospitals: Children's, Columbia Hospital for Women, Freedmen's, Georgetown University, George Washington University (Warwick Memorial Clinic), Providence, U.S.A.F. Hospital at Andrews Air Force Base, Veterans Administration, Walter Reed General, and Washington Hospital Center.

Woman's Auxiliary Notes

Community Service Report

To HELP District health teachers keep up to date with interesting, accurate health information our Woman's Auxiliary to the D. C. Medical Society has made available *Health Education Service* to District secondary schools and colleges. *Health Education Service* is a monthly bulletin containing abstracts of pertinent articles from health literature not commonly available through other sources. The *Service* is sponsored and paid for by the A.M.A.

To further help bring health educational material into our public school system, gift subscriptions of *Today's Health* have been sent to 43 school libraries. Letters from the school librarians have told us how appreciative they are of this 'valuable contribution.'

In future meetings more emphasis will be given to the use of A.M.A. Health Information pamphlets and to effective participation by our members in other community health programs.

MRS. GEORGE A. BOINIS
Chairman, Community Service Committee

New Clinical Center Studies

Patients with thymoma and associated hypogammaglobulinemia or aplastic anemia. The coöperation of physicians is requested in a study of thymomas associated with hypogammaglobulinemia or aplastic anemia being conducted by the National Cancer Institute at the Clinical Center, National Institutes of Health, Bethesda, Md.

Suitable patients with thymoma and hypogammaglobulinemia will be admitted to the Clinical Center for studies of immunologic function including gammaglobulin turnover studies. They will be evaluated for nature and extent of chronic infectious disease and appropriate recommendations will be made to referring physicians.

Patients with thymomas and aplastic anemia will be studied to determine rate of erythropoietin production and to determine if antibodies to erythropoietin or erythropoietic precursors are present.

Physicians interested in having their patients considered for this study may write or telephone: Thomas Waldmann, M.D., Clinical Center, Room 4-N-112, National Institutes of Health, Bethesda, Md. 20014; telephone: 656-4000, ext. 66480.

Renal glycosuria and adult Fanconi syndrome. The coöperation of physicians is also requested in the referral of patients for a study currently in progress at the Clinical Center by the National Institute of Arthritis and Metabolic Diseases designed to evaluate abnormal metabolism of glucose and amino acids in patients with either renal glycosuria or the adult Fanconi syndrome.

Physicians interested in having their patients considered for admission to this study may write or telephone: Stanton Segal, M.D., Clinical Center, Room 8-N-256, National Institutes of Health, Bethesda, Md. 20014; telephone: 656-4000, ext. 63010.

Blood-glucose screening for all your patients?

...because "Abnormalities of glucose metabolism are among the [most common] encountered in clinical practice...."* Simple, quick, economical blood-glucose screening with DEXTROSTIX® Reagent Strips is practicable in every regular physical examination, emergency situation, and whenever hypo- or hyperglycemia may be of clinical significance—for "The precision and accuracy of DEXTROSTIX ...meet the need for an always available simple screening method...."* All that is required for screening with DEXTROSTIX is 60 seconds and a globular drop of capillary or venous blood. Abnormal readings will be a valuable aid to diagnosis; normals will help you establish an important baseline for future reference.

*Marks, V., and Dawson, A.: Brit. M. J. *1*:293, 1965.

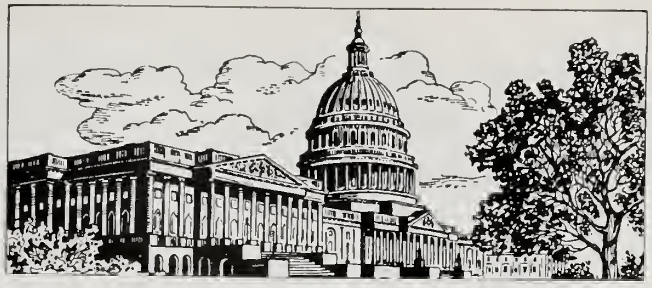
DEXTROSTIX—
provides a clinically useful determination when performed according to directions†

†DEXTROSTIX is not intended to replace the more precise analytical laboratory methods.

Yes—all your patients

AMES COMPANY, INC.
Elkhart, Indiana

09165



NEWS & PERSONALS

Meetings

The Washington School of Psychiatry is sponsoring a lecture on "Psychiatry and the Illness of King George III," to be given by Dr. Richard Hunter, Secretary of the Section on Psychiatry of the History of Medicine of the Royal Society of Medicine. The lecture will be given on Monday, May 2, at 8:30 p.m. in the Exhibit Hall of the D. C. Medical Society Building, 2007 Eye Street, N.W.

Dr. Hunter has written extensively on varied subjects in the field of mental health. He was the Alfred P. Sloan Visiting Professor at the Menninger Clinic, Topeka, Kansas, and recently delivered the Josiah C. Trent Lecture at Duke University on his research with Dr. Macalpine on the insanity of George III.

All Washington physicians and interested persons are invited to attend this program.

The Eighth Annual Cardiac Symposium to be sponsored by the Montgomery County Tuberculosis and Heart Association will be held at the National Institutes of Health, Bethesda, Md., on Thursday, May 12. The theme this year is "Recent Advances in Diagnosis and Treatment of Heart Disease Applicable in the Community Hospital."

Registration will open at 9:00 a.m., with the first paper scheduled at 9:30 a.m. Speakers at the morning session will be Dr. Myron W. Wheat, Jr., Chief of the Division of Thoracic and Cardiovascular Surgery, College of Medicine, University of Florida; Dr. Andrew G. Prandoni, Clinical Professor of Medicine, George Washington University School of Medicine; and Dr. Jack A. Cannon, Professor of Surgery at the University of California School of Medicine at Los Angeles.

Luncheon will be served in the National Institutes of Health Cafeteria. The afternoon session, to begin at 2:00 p.m. will feature the following speakers: Dr. Benjamin M. Baker, Professor of Medicine at Johns Hopkins University; Dr. Tinsley R. Harrison, Professor of Medicine at the University of Alabama Medical Center and Hospital; Dr. Edward L. Cohen, Instructor in Internal Medicine and member of the Metabolism Research Unit, University of Michigan Medical Center; and Lt. Colonel Robert H. Moser, Chief, Department of Medicine, William Beaumont General Hospital, El Paso, Texas.

All physicians in the Washington Metropolitan Area are invited to attend. There will be no registration fee.

1966 Kober Lecture

Auditorium

Gorman Diagnostic and Research Building
Georgetown University Medical Center

Wednesday, April 27, 1966—8 P.M.

SPEAKER:

William H. Stewart, M.D.

Surgeon General of the Public Health Service

SUBJECT: "Medical Education and the Community"

ADMISSION FREE

A Postgraduate Course on Pediatric Allergy will be presented at Children's Hospital of the District of Columbia, May 25, 26 and 27, in conjunction with the Departments of Pediatrics of

COMPLETE
INVESTMENT SERVICE

FERRIS & COMPANY

Members New York Stock Exchange
611 Fifteenth St. N.W.
STerling 3-8222

George Washington University and Georgetown University Schools of Medicine. The Course will include practical immunology and allergy for the physician caring for children.

Dr. Saul Krugman, Professor and Chairman of the Department of Pediatrics at New York University, will deliver the Eleventh Annual Joseph Wall Memorial Lecture in the Wall Auditorium, May 27, at 2:00 p.m. His subject will be "Changing Patterns of Infectious Diseases."

Please address any communications to Dr. William A. Howard, Postgraduate Program, Children's Hospital of D. C., Washington, D. C. 20009.

Georgetown University School of Medicine will conduct a short-term training course for physicians on "The Management of the Chronic Disease Patient," which will consist of 2 all-day meetings, June 9 and 10. There will be a dinner and evening program on June 9. Registration is limited, but there is no fee. Application should be made to Dr. Margaret M. Kenrick, 3800 Reservoir Road, N.W., Washington, D. C. 20007.

The First International Congress on Smoking and Health will convene at the New York Hilton Hotel, New York City, June 5–7. The announcement was made by Dr. Alton Ochsner, of the Ochsner Thoracic Clinic, New Orleans, who is President of the Congress.

The Congress will focus on the effects of smoking on health and will discuss the responsibilities of Government, educators, public health officials, and the medical profession to the public. Internationally known authorities will present papers and discuss their findings on these problems.

Dr. Richard H. Overholt, of the Overholt Thoracic Clinic of Boston, is Chairman of the Program Committee. Inquiries regarding the meeting may be addressed to the Congress Manager, Overseas Press Club, 54 West 40th Street, New York, N. Y. 10018.

General News

Georgetown University School of Medicine and the Food and Drug Administration have entered into an initial year's contract whereby Georgetown University Hospital will make the facilities of all its medical departments available for the study of drugs on humans that the FDA may request periodically. Patients at D. C. General Hospital under the supervision of Georgetown researchers and physicians will be included for study. Opportunity will also be provided for clinically-oriented drug research and for the training of FDA and Georgetown physicians and scientists in problems of interest to the Agency.

The first year's contract calls for a payment of $302,170 to the University. The whole operation will be under the immediate direction of Dr. Christopher Martin, Professor of Medicine and Pharmacy at Georgetown. The Advisory Board will be headed by Dr. John C. Rose, Dean of Medicine at Georgetown, and will include Dr. Joseph F. Sadusk, Jr., Medical Director of FDA. Other members of the Board, all of Georgetown, are Drs. Walter C. Hess, Clifton K. Himmelsbach, Charles A. Hufnagel, Theodore Koppanyi, Laurence H. Kyle, and George E. Schreiner.

A newly-formed **International Eye Foundation**, which will operate under Care-Medico, was announced early in February by Dr. J. Harry King, Jr., its Medical Director. General Dwight D. Eisenhower will serve as Honorary President of the Board of Directors.

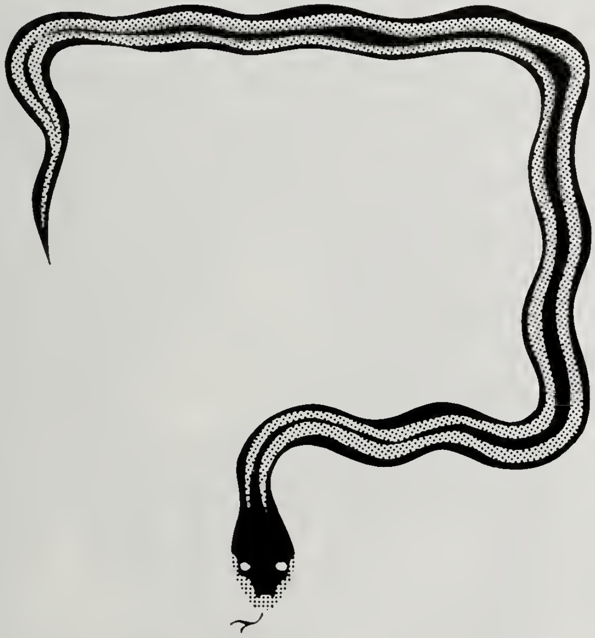
The IEF will administer the International Eye Bank which was founded in 1961. One of its major functions will be the establishment of the Foresight Club to raise the funds needed to achieve the Foundation's goals. These include eye fellowships, visiting eye professor programs, eye medical teaching missions, and the continued operation of the Eye Bank.

The offices of IEF are located at 110 Irving Street, N.W., Washington, D. C. 20010.

The Committee on Rating of Mental and Physical Impairment of the AMA announces the availability of the eighth guide in the series, **"Guides to the Evaluation of Permanent Impairment,"**

"In 40 of 44 cases of irritable or spastic colon, Cantil [mepenzolate bromide] or Cantil with Phenobarbital reduced or abolished abdominal pain, diarrhea and distention and promoted restoration of normal bowel function . . . Cantil [mepenzolate bromide] proved to be singularly free of anticholinergic side-effects . . . Urinary retention, noted in two cases was eliminated in one by reducing dosage."[1]

CHARMS THE HYPERACTIVE COLON



CANTIL®

(mepenzolate bromide)

helps restore normal motility and tone

IN BRIEF:

One or two tablets three times a day and one or two at bedtime usually provide prompt relief. Cantil with Phenobarbital may be prescribed if sedation is required.

Dryness of the mouth or blurring of vision may occur but it is usually mild and transitory. Urinary retention is rare. Caution should be observed in prostatic hypertrophy—withhold in glaucoma. Cantil with Phenobarbital is contraindicated in patients sensitive to phenobarbital.

Supplied: CANTIL (mepenzolate bromide) —25 mg. per scored tablet. Bottles of 100 and 250. CANTIL with PHENOBARBITAL —containing in each scored tablet 16 mg. phenobarbital (warning: may be habit forming) and 25 mg. mepenzolate bromide. Bottles of 100 and 250.

1. Riese, J.A.: Amer. J. Gastroent. 28:541 (Nov.) 1957

LAKESIDE LABORATORIES, INC., Milwaukee, Wisconsin 53201

LAKESIDE

PRODUCTS
FOR PATIENTS
YOU SEE
EVERY DAY

this one devoted to **"The Respiratory System."** This guide, like all the others in the series, is designed primarily for use by physicians and was published recently in *The Journal of the American Medical Association* (1965 [November 22], **194**, 919–32). A limited number of copies may be obtained without charge upon request to the Committee at 535 North Dearborn Street, Chicago, Ill. 60610.

Mr. John F. Imirie, Jr., Business Manager of Georgetown University Hospital since 1964, has been named Administrator of the Hospital.

The American Hospital Association has opened a **Southeast Regional Office** at 3376 Peachtree Street, N.E. in Atlanta, Ga. Dr. Joseph H. McNinch, who retired January 1 as Chief Medical Director of the Veterans Administration, will serve as Director of the Atlanta Office.

Dr. H. W. Doan has been named Secretary to the Council on Medical Service of the American Medical Association and assistant to Dr. Charles C. Edwards, Director of the Division of Socio-Economic Activities. Dr. Doan has been Director of the Department of Hospitals and Medical Facilities.

Dr. Richard F. Manegold has been appointed Secretary of the Committee on Medical Facilities and Director of the Department of Hospitals and Medical Facilities. Dr. Manegold left Washington in 1963 to become Assistant Director of the Department of Medical Education and Hospitals.

The James F. Mitchell Foundation has received from the executors of the estate of the late Mrs. James F. Mitchell the deed to the home at 1344 19th Street, N. W. A portrait of Dr. Mitchell by Bjorn Egeli was also presented to the Foundation. Dr. Mitchell, one of Washington's most distinguished surgeons, died May 3, 1961.

Thirty-five junior and senior medical students of the United States have recently been **awarded Smith Kline and French Foreign Fellowships** to enable them to obtain supervised medical experience in relatively underdeveloped areas of the world. The assignments are made by the Association of American Medical Colleges. Two of these are students from Washington medical schools. Miss Alice Martinson, a junior honor student at George Washington University School of Medicine, will spend 10 weeks in Malaysia at MEDICO's General Hospital at Kuala Lipis, Pahang. This 173-bed hospital serves more than 40,000 people of the Pahang Valley in Central Malaysia where the people are farmers and rubber plantation workers.

Miss Audrey Y. Reid, a junior at Howard University College of Medicine, will secure clinical training with the Health Service of the Republic of Uganda in East Africa for a 12-week period. She will leave in June for Buganda Province in Uganda, and plans to work in a dispensary unit equipped with 15 to 25 beds and possibly with a maternity unit as well. Dispensaries like these may care for as many as 300 to 400 patients a week.

Personals

Dr. George E. Schreiner, the new President-elect of the Southern Society for Clinical Investigation, was elected to this office at the 26th Annual Meeting of the Society, held in New Orleans late in January. Dr. Schreiner is Professor of Medicine at the Georgetown University School of Medicine and Director of the Renal and Electrolyte Division.

Dr. Schreiner has also been appointed to the Residency Review Committee in Internal Medicine of the Council on Medical Education of the American Medical Association. The Residency Review Committee assists and helps supervise the training programs of various teaching hospitals throughout the country.

Dr. Roland B. Scott was elected Vice President of the American Academy of Allergy at the business meeting of the Academy on February 22 in New York City. The Society has a membership of nearly 1,600 physicians from the U.S.A. and 40 other countries. Dr. Scott is head of the Department of Pediatrics at Howard University and Chief Pediatrician at Freedmen's Hospital. He is also Chief of the Children's Allergy Clinic at the D. C. General Hospital.

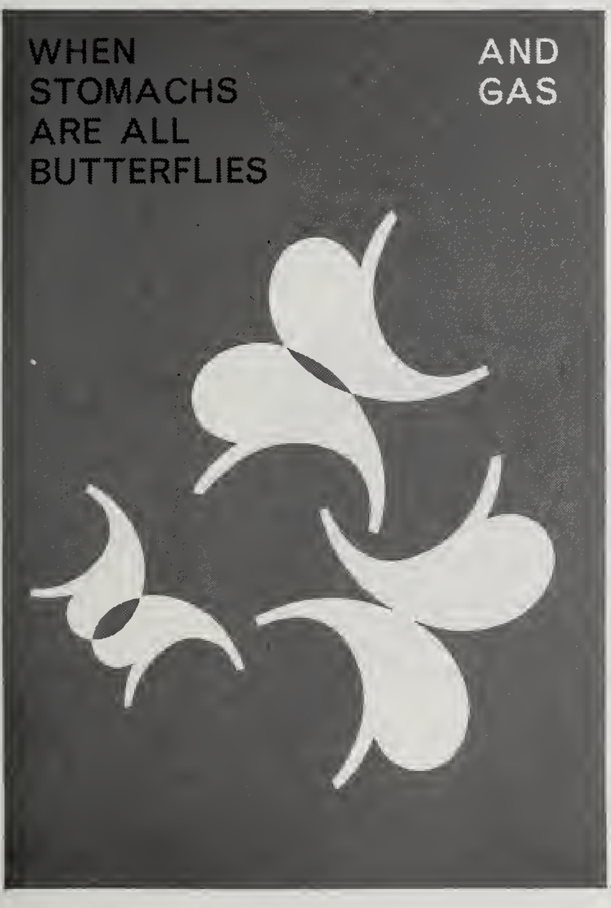
Dr. Frederic D. Chapman is the new President of Medical Services International, Inc., which is headquartered in Washington, D. C. at 1712 Eye Street, N.W.

Dr. R. Lomax Wells was elected Chairman of the Council on Occupational Health of the American Medical Association, January 21. Dr. Wells is Medical Director of the Chesapeake and Potomac Telephone Companies.

DACTILASE®

Each tablet contains:
Dactil® (piperidolate hydrochloride), 50 mg.;
Standardized cellulolytic* enzyme, 2 mg.;
Standardized amylolytic enzyme, 15 mg.;
Standardized proteolytic enzyme, 10 mg.;
Pancreatin 3X** (source of lipolytic activity), 100 mg.; Taurocholic acid, 15 mg.

*Need in human nutrition not established.
**As acid resistant granules equivalent in activity to 300 mg. Pancreatin N.F.


WHEN STOMACHS ARE ALL BUTTERFLIES
AND GAS

In chronic or acute indigestion, fluttery, gassy stomachs obtain prompt, gratifying relief through the antispasmodic, surface anesthetic and enzymatic activity of Dactilase. Dactilase decreases hypermotility and pain and reduces the production of gas. Dactilase does not induce stasis, but helps restore normal tone. It has little or no effect on enzyme secretions, but *adds* enzymes, thus contributing to the digestive efficiency of the patient.

Side Effects and Contraindications: Dactilase is almost entirely free of side effects. However, it should be withheld in glaucoma and in jaundice due to complete biliary obstruction.

Administration and Dosage: One tablet with, or immediately following, each meal. Tablets should be swallowed whole.

Supplied: Bottles of 60 and 250.

LAKESIDE LABORATORIES, INC., Milwaukee, Wisconsin 53201

LAKESIDE

PRODUCTS
FOR PATIENTS
YOU SEE
EVERY DAY

Save . . .

at National Permanent, one of the area's oldest and largest Savings and Loan Associations

CURRENT
DIVIDEND RATE
4¼%
PER ANNUM

INSURED

NATIONAL PERMANENT SAVINGS
AND LOAN ASSOCIATION
Founded 1890

MAIN OFFICE
14th & G Streets, N.W.
CONNECTICUT AVE. AT K ST.
1000 Connecticut Ave.
CHEVY CHASE
5700 Connecticut Ave.
LANGLEY PARK, MD.
7633 New Hampshire Ave.

ASSETS OVER $150,000,000.00

Dr. James J. Feffer has been elected Vice Chairman of the Section on Internal Medicine of the Southern Medical Association.

Dr. Desmond S. O'Doherty, Director of the Department of Neurology at Georgetown University, has been appointed Medical Director of Georgetown Hospital.

Dr. Paul R. Wilner, immediate Past President of the D.C. Medical Society, was given a special citation by the Jacobi Medical Society at its Anual Banquet, February 19, at the Statler Hilton Hotel. Dr. Harvey H. Ammerman presented the citation to Dr. Wilner which described him as "a community leader whose meritorious contributions to his patients and his profession have earned him the admiration of his colleagues and the gratitude of his community." Presiding at the banquet was Dr. Norman H. Isaacson, President of the Society.

Dr. J. Bay Jacobs, who has retired as Chief of Obstetrics and Gynecology at Arlington County (Va.) Hospital, was honored at a luncheon, January 11, at the Hospital and presented with a plaque commemorating his 22 years of service. Dr. Jacobs is a Life member of the D. C. Medical Society.

Dr. Edward P. Luongo has been appointed to the faculty of Georgetown University as Clinical Associate Professor of Community Medicine and International Health in the School of Medicine. Dr. Luongo, an Associate member of the D. C. Medical Society, is Associate Medical Director of the Socony Mobil Oil Company, with headquarters in New York City.

Dr. Joseph F. Fazekas left from Los Angeles on February 15 with a group of volunteer physicians to serve for a 60-day period with Project Vietnam.

Dr. John W. Roark, an Associate member of the D. C. Medical Society, has been named President of the Medical Staff of the Alexandria (Va.) Hospital.

Dr. Alan M. Weintraub was certified as a specialist in cardiovascular disease in November 1965 by the Subspecialty Board for Cardiovascular Disease of the American Board of Internal Medicine.

For cold hands and feet, nothing beats hot stoves—but they *are* awkward to carry around. Now Gerilid, in good-tasting take-along chewable tablets can provide rapid vasodilation of peripheral circulation, bringing real warmth to the extremities and decreasing sensitivity to sudden temperature change. Patients *like* Gerilid and *know* they are getting relief.

WARMTH
FOR COLD
HANDS AND FEET

GERILID™

Each chewable tablet contains:
nicotinic acid (niacin) 75 mg. and
aminoacetic acid (glycine) 750 mg.

Administration and Dosage: One or two chewable tablets 3 times a day before meals. If flushing is objectionable, dosage may be lowered. However, tolerance to flushing usually develops without loss of efficacy in regard to vasodilation. The recommended dosage should not be exceeded.

Side effects: Occasional lightheadedness or transient itching which may disappear with continued use. There are no known contraindications; however, caution is advised when there is a concomitant administration of a coronary vasodilator.

Supplied: Packages of 50 chewable tablets.

Also available in liquid form as Geriliquid®, in bottles of 8 and 16 ounces.

LAKESIDE LABORATORIES, INC., Milwaukee, Wisconsin 53201

LAKESIDE

PRODUCTS
FOR PATIENTS
YOU SEE
EVERY DAY

Correspondence

Washington, D. C.. October 26, 1965
To President Wilner:

During the current and last years my wife and I have needed repeated medical consultations with physicians of different specialties. On each occasion we presented our Blue Shield form in an attempt to compensate for the services of the respective physician. I may add that the expenses exceeded the $100 for which no payment is made. The response was almost always the same: The respective colleague either declined to fill out the Blue Shield form or did not respond to the request. As a result we felt it necessary to compensate with some type of present, and also we felt embarrassed.

Of course, these physicians acted in the belief that their procedure is according to the requirement of high professional ethics. Their attitude was motivated by very noble ideas. Nevertheless, I believe they were wrong. We have the right to pay for the services rendered and Blue Shield makes it ethically more acceptable. To my best knowledge ours is not an isolated case, and other physicians have similar problems. I am calling this matter to your attention because I feel that the Medical Society may wish to find a way to look into this misinterpretation of medical ethics and find a way to influence our colleagues to take a different attitude. I believe this would be not only in the interest of the patient but also of the attending physician, and Blue Shield as well.

I shall greatly appreciate it if you will give consideration to this matter.

Sincerely yours,
Bela Gondos, M.D.

Dear Dr. Gondos:

Please forgive my delay in answering your very astute and perceptive letter of October 26 regarding physicians paying their doctors.

Your opinions are very sound, and I know they come from your heart and are shared by many. Physicians have traditionally followed the pattern of not charging the poor, the clergy, or their own colleagues. This is a philosophical approach and may be wrong in the practical commercial aspect of our current socioeconomic life.

I believe if a physician has insurance for himself or his family, the physician should be paid by the insurance company without any personal monetary motivation. However, I also believe in the concept of treating and helping one's own colleagues and families without recompense, because the whole socio-medic(o) economic system is based upon humanitarian ideals—not current legislation or insurance programs. But this is a very personal opinion and may not be a correct one.

Your letter and suggestions will be forwarded to the Committee on Insurance for their advice and guidance. I should like to suggest that you write a letter to the Editor of the Medical Annals. There are many who feel as you do and your communication might bring this whole issue out into the open.

Sincerely yours,
Paul R. Wilner, M.D.

Obituaries

George James Stuart, Ph.B., M.D.

(1905–1966)

Dr. George James Stuart, specialist in allergy, died, January 29, 1966 at the Washington Hospital Center. He lived at 1330 New Hampshire Avenue, N.W.

Dr. Stuart was born in New Haven, Conn., December 7, 1905. He received the degree, Bachelor of Philosophy, from Yale University in 1928, then went abroad to study medicine, graduating from the University of Bonn in 1934. He returned to the States to intern at Jersey City Medical Center and Hudson County General Hospital. He spent 2 years, 1938 to 1940, at the University of Michigan Hospital for special training in allergy.

Dr. Stuart began his practice in Washington in 1941 in offices located at 1150 Connecticut Avenue, N.W., where he continued to practice until his death. He was on the staffs of the Arlington, Georgetown University, and George Washington University Hospitals.

Dr. Stuart was an Active member of the Medical Society of the District of Columbia and at the time of his death was Chairman of its Section on Allergy. He was a Fellow of the American Academy of Allergy and a member of the American Medical Association, the Southern Medical Association, the International Association of Allergology, the Hippocrates-Galen Medical Society, and the Medical Arts Society of Greater Washington. He also belonged to the International Club of Washington, the Yale Club of Washington, and the President's Club of the University of Michigan.

Two sons survive him, George J. Stuart Jr., of Columbus, Ohio, and Roger K. Stuart of Ann Arbor, Michigan. He also leaves a sister, Mrs. Abraham White, of New York City.

Obstetrical or post—surgical patients requiring a dependable increase in hemoglobin will receive as much iron (250 mg. in a 5 cc. ampul) as in one pint of blood. Imferon (iron dextran injection) is less expensive and it avoids the well-recognized hazards of whole blood transfusion. When patients cannot—or cannot be relied upon to—take oral iron, Imferon (iron dextran injection) will rapidly supply needed iron for reserve stores.

ONE PINT OF BLOOD PROVIDES NO MORE IRON THAN ONE 5 CC. AMPUL OF

IMFERON®
(iron dextran injection)

IN BRIEF: ACTION AND USES: A single dose of Imferon (iron dextran injection) will measurably begin to raise hemoglobin and a complete course of therapy will effectively rebuild iron reserves. The drug is indicated only for specifically-diagnosed cases of iron deficiency anemia and then only when oral administration of iron is ineffective or impractical. Such iron deficiency may include: patients in the last trimester of pregnancy; patients with gastrointestinal disease or those recovering from gastrointestinal surgery; patients with chronic bleeding with continual and extensive iron losses not rapidly replenishable with oral iron; patients intolerant of blood transfusion *as a source of iron;* infants with hypochromic anemia; patients who cannot be relied upon to take oral iron.
COMPOSITION: Imferon (iron dextran injection) is a well-tolerated solution of iron dextran complex providing an equivalent of 50 mg. in each cc. The solution contains 0.9% sodium chloride and has a pH of 5.2-6.0. The 10 cc. vial contains 0.5% phenol as a preservative.
ADMINISTRATION AND DOSAGE: Dosage, based upon body weight and Gm. Hb./100 cc. of blood, ranges from 0.5 cc. in infants to 5.0 cc. in adults, daily, every other day, or weekly. The total iron requirement for the individual patient is readily obtainable from the dosage chart in the package insert. Deep intramuscular injection in the upper outer quadrant of the buttock, using a Z-track technique, (with displacement of the skin laterally prior to injection), insures absorption and will help avoid staining of the skin. A 2-inch needle is recommended for the adult of average size.
SIDE EFFECTS: Local and systemic side effects are few. Staining of the skin may occur. Excessive dosage, beyond the calculated need, may cause hemosiderosis. Although allergic or anaphylactoid reactions are not common, occasional severe reactions have been observed, including three fatal reactions which may have been due to Imferon (iron dextran injection). Urticaria, arthralgia, lymphadenopathy, nausea, headache and fever have occasionally been reported. Initial test doses of 0.5 cc. are advisable.
PRECAUTIONS: If sensitivity to test doses is manifested, the drug should not be given. Imferon (iron dextran injection) must be administered by deep intramuscular injection only. Inject only in the upper outer quadrant of the buttock, not in the arm or other exposed area.
CONTRAINDICATIONS: Imferon (iron dextran injection) is contraindicated in patients sensitive to iron dextran complex. Since its use is intended for the treatment of iron deficiency anemia only it is contraindicated in other anemias.
CARCINOGENICITY POTENTIAL: Using relatively massive doses, Imferon (iron dextran injection) has been shown to produce sarcoma in rats, mice and rabbits and possibly in hamsters, but not in guinea pigs. The risk of carcinogenesis, if any in man, following recommended therapy with Imferon (iron dextran injection) appears to be extremely small.
SUPPLIED: 2 cc. ampuls, boxes of 10; 5 cc. ampuls, boxes of 4; 10 cc. multiple dose vials.

LAKESIDE LABORATORIES, INC., Milwaukee, Wisconsin 53201

LAKESIDE

PRODUCTS
FOR PATIENTS
YOU SEE
EVERY DAY

Thomas Sim Lee, A.B., M.D., F.A.C.P.

(1868–1966)

Dr. Thomas S. Lee, dean of Washington cardiologists, died in New York City, February 17, 1966, at the age of 97 years. A renowned cardiologist, he was the founder and first President of the Washington Heart Association and one of Washington's first heart specialists, as well as one of the first in the country.

Dr. Lee was born in New York City, December 24, 1868. His father was Charles Carroll Lee, a prominent gynecologist, who served a term as President of the Medical Society of New York. His great-grandfather, Thomas Sim Lee, was Governor of Maryland during the American Revolution, and he was the great-great-grandson of a signer of the Declaration of Independence, Charles Carroll, of Carrollton.

Dr. Lee attended preparatory school at Stoneyhouse, England. He returned to the States to earn his Bachelor's degree from Harvard in 1891 and his medical degree from Columbia University, College of Physicians, in 1894. After 6 years of postgraduate study abroad at the University of Vienna and at Johns Hopkins University in Baltimore, he came to Washington to begin private practice in 1900, a practice which was to continue for 60 years.

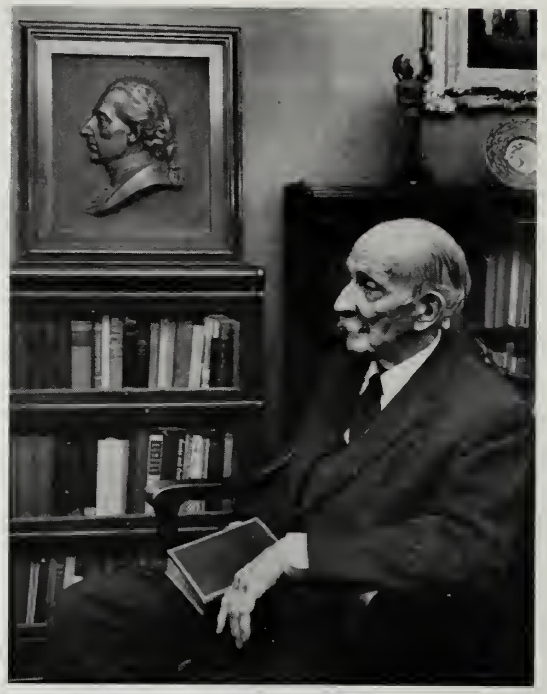
He volunteered his services to his country during the Spanish-American War. In World War I he served in the Army Medical Corps as a consultant on heart diseases.

In 1908 he started the first heart clinic in Washington at Providence Hospital. He had the first electrocardiograph in Washington, which has now been donated to the Smithsonian Institution.

From 1904 to 1950 he taught at Georgetown University School of Medicine and was Professor of Cardiology Emeritus at the time of his death.

About 1926, Dr. Lee gathered a number of his associates in his home to form the Washington Heart Association. It was one of the early branches of the American Heart Association and has become one of the community's major health agencies.

Dr. Lee was a diplomate of the American Board of Internal Medicine, a Fellow of the American College of Physicians, and Honorary President of the Washington Heart Association. He was a Life member of the Medical Society of the District of Columbia.



THOMAS SIM LEE, M.D., in 1961, in the library of his home beside a portrait in bronze of his great-great-grandfather, Charles Carroll of Carrollton, who signed the Declaration of Independence.

He held an honorary Master's degree from Georgetown University, and an honorary degree, Doctor of Laws, from Mount St. Mary's College at Emmitsburg, Md.

His charitable activities and philanthropic interests were numerous.

He never married. Surviving are 2 sisters, Mrs. Robert S. Peabody and Mrs. Outerbridge Horsey, both residents of New York City.

The Washington Star paid tribute to him in an editorial on February 23, which read in part as follows:

"As a professor at Georgetown University's School of Medicine, as a pioneer in diagnostics, Dr. Lee lived a supremely useful life, full of skill and achievement and an unmatched concern for human life. But for all of his high credentials, he remained a kind and gentle man who spent many hours each week visiting the homes of his poorer patients. The mark he leaves on modern medicine is as deep and true as the affection his memory holds for thousands of Washingtonians."

SAVES
LIVES
SAVES
MONEY
WASTES
WATER

METAHYDRIN (trichlormethiazide) is prescribed by physicians because it not only approximates the diuretic efficacy of parenteral meralluride injection . . . but, *it is the least expensive of all "brand-name" thiazides.* Therefore, when you prescribe METAHYDRIN (trichlormethiazide) your patients receive the thiazide diuretic that removes a little more salt and water than earlier thiazides, with relatively less loss of potassium . . . and, it's therapy they can more easily afford . . . *only pennies a day.*

METAHYDRIN®
(trichlormethiazide)
oral diuretic

Dosage: One 2 or 4 mg. tablet once or twice daily.

Precautions: As with all effective diuretics, vigorous therapy may produce electrolyte depletion. Patients with severely reduced renal function should be observed carefully since thiazides may be contraindicated. Care should be taken with patients predisposed to diabetes or gout. Patients with a tendency to potassium deficiency, as in hepatic cirrhosis or diarrheal syndromes, or those under therapy with digitalis, ACTH, or certain adrenal steroids, also should be watched carefully.

Side Effects: Nausea, flushing, constipation, skin rash, muscle cramps and gastric discomfort have occasionally been noted; rarely thrombocytopenia and bone marrow depression, photosensitivity, cholestatic jaundice, pancreatitis, perimacular edema, gout and diabetes have been caused by the administration of thiazides.

Contraindications: Complete renal shutdown; rising azotemia or development of hyperkalemia or acidosis in severe renal disease; demonstrated hypersensitivity.

How Supplied: Bottles of 100 and 1000 tablets.

LAKESIDE LABORATORIES, INC., Milwaukee, Wisconsin 53201

LAKESIDE

PRODUCTS
FOR PATIENTS
YOU SEE
EVERY DAY

NURSES REGISTRY
EXPERIENCED UNDERGRADUATE
& PRACTICAL NURSES

Recommended by Physicians
At Your Service for Day or Night Duty
in Washington and nearby area

CALL—RAndolph 6-6706

Peritoneoscopy—Hitzelberger et al

(Continued from page 194)

2. Kalk, H., Wildhirt, E., and Burgmann, W.: Lehrbuch und Atlas der Laparoskopie und Leberpunktion. Stuttgart: Georg Thieme Verlag, 1962.
3. Ruddock, J. C.: Southern Surg., 1939, **8**, 113.
4. Keil, P. G., and Landis, S. N.: J. Iowa Med. Soc., 1951, **41**, 48.
5. Ruddock, J. C.: Surg. Clin. N. Amer., 1957, **37**, 1249.
6. Zoeckler, S. J.: Gastroenterology, 1958, **34**, 969.
7. Aronson, A. R., and Parker, G. W.: Amer. J. Dig. Dis., 1960, **5**, 931.
8. Johnston, I. D. A., and Rodgers, H. W.: Gut, 1964, **5**, 485.
9. Frangenheim, H.: Die Laparoskopie und die Culdoskopie in der Gynaekologie. Stuttgart: Georg Thieme Verlag, 1959.
10. Keil, P. G., and Landis, S. N.: Arch. Intern. Med. (Chicago), 1951, **88**, 36.
11. Wannagat, L., cited by Kalk et al: see ref. 2, pp. 57–9.
12. Creutzfeldt, W., Beck, K., and Mössner, G.: Deutsch. Med. Wschr., 1965, **90**, 224.
13. Benedict, E. B.: Endoscopy as Related to Diseases of the Bronchus, Esophagus, Stomach, and Peritoneal Cavity. Baltimore: Williams & Wilkins, 1951.
14. Vilardell, F.: Chap. 85 in Bockus, H. L., edited by: Gastroenterology, 2nd ed. Philadelphia: Saunders, 1964, **2**, pp. 1185–1202.
15. Korbsch, R.: Lehrbuch und Atlas der Laparoskopie und Thorakoskopie. Muenchen: J. F. Lehmanns Verlag, 1927.
16. Schmidt, K. E. A.: Laparoskopische Tafeln. Grenzach in Baden: Deutsche Hoffman-LaRoche A. G., 1951.
17. Uhlich, G. A., and Haubrich, W. S.: Amer. J. Gastroent., 1962, **38**, 313.

Variations of the 17–18 Trisomy—Scherz

(Continued from page 200)

this syndrome. This would suggest that this virus and others may be important in the development of chromosomal abnormalities during meiosis or in the first few mitoses of the fertilized ovum.

The pathologic variations are many with the 17–18 trisomy. This devastation is due to some poorly defined effect of excessive genetic material during early embryogenesis. The pathologic variations described in these 6 patients have been tabulated in table 1.

Summary

This article describes 6 previously unreported patients with 17–18 trisomy which have been recognized and studied at Walter Reed General Hospital during the past 2 years. The more characteristic and relatively little known morphologic abnormalities have been presented to more clearly define the full scope of the 17–18 trisomy.

Acknowledgments are made to Dr. Modestino G. Criscitiello for referring patient A.F. from Georgetown University Hospital and to Major Robert F. Hinckley, MC, USA, for helping in the preparation of this manuscript.

References

1. Edwards, J. H., and others: Lancet, 1960, **1**, 787.
2. Smith, D. W., Patau, K., Therman, E., and Inhern, N.: J. Pediat., 1960, **57**, 338.
3. Townes, P. L., Manning, J., and Dehart, A. K.: Ibid., 1962, **61**, 755.
4. Crawford, M. d'A: Lancet, 1961, **2**, 22.
5. Steinberg, J. B., and Jackson, J. F.: Amer. J. Dis. Child., 1963, **105**, 213.
6. Gottlieb, M. I., and others: Amer. J. Med., 1962, **33**, 763.
7. Uchida, I., Lewis, A. J., Bowman, J. M., and Wang, H. C.: J. Pediat., 1962, **60**, 498.
8. German, J. L., and others: Ibid., 1962, **60**, 503.
9. Smith, D., Patau, K., Therman, E., and Inhern, S.: Ibid., 1962, **60**, 513.
10. Uchida, I., Bowman, J., and Wang, H.: New Eng. J. Med., 1962, **266**, 1198.
11. Trans. Soc. for Pediatric Research: Amer. J. Dis. Child., 1962, **104**, 533.
12. Patau, K., Therman, E., Smith, D. W., and Demors, R. I.: Chromosoma, 1961, **12**, 280.
13. Oikawa, K., Kocken, J. A., Schorr, J. B., and Hirschhorn, K.: J. Pediat., 1963, **63**, 715.
14. Uchida, I., Patuau, K., and Smith, D.: Amer. J. Dis. Child., 1961, **102**, 588.
15. Ferguson-Smith, M. A.: Lancet, 1962, **2**, 357.
16. Steinberg, J. B., and Jackson, J. F.: Amer. J. Dis. Child., 1963, **105**, 213.
17. Sever, J. L.: Personal communication, December 1965.

**BRING IT DOWN
AND
KEEP IT DOWN**

190
102

Metatensin lowers blood pressure and keeps it low—effectively and economically. It combines reserpine with trichlormethiazide which affords more potent saluresis with less loss of potassium than from earlier thiazides. Reserpine contributes antihypertensive effect by relieving anxiety and tension. Metatensin is well-tolerated over long periods; with its effectiveness and economy it assures antihypertensive therapy you and your patients can stay with.

METATENSIN®

Each scored tablet contains:
METAHYDRIN® (trichlormethiazide)
2 mg. or 4 mg. and
Reserpine 0.1 mg.

Usual adult dose: One tablet twice daily. **Precautions and side effects:** Patients with hepatic cirrhosis or diarrheal syndromes, or under therapy with digitalis, ACTH, or potassium-losing steroids, should be observed for signs of hypokalemia. With thiazides, electrolyte depletion, diabetes, gout, granulopenia, nausea, pancreatitis, cholestatic jaundice, flushing, mild muscle cramps, constipation, photosensitivity, acute myopia, perimacular edema, paresthesias, neonatal bone marrow depression in infants of mothers who received thiazides during pregnancy, skin rash or purpura with or without thrombocytopenia, may occur. With reserpine, untoward effects may include depression, peptic ulcer and bronchial asthma. Withdraw medication at least 7 days prior to electroshock therapy, 2 weeks prior to elective surgery.

Contraindications: Complete renal shutdown, rising azotemia or development of hyperkalemia or acidosis in severe renal disease.

Supplied: Metatensin tablets, 2 mg., 4 mg.—bottles of 100 and 1000.

LAKESIDE LABORATORIES, INC., Milwaukee, Wisconsin 53201

LAKESIDE

PRODUCTS
FOR PATIENTS
YOU SEE
EVERY DAY

BOOK REVIEWS

Diagnosis and Therapy of the Glaucomas, 2nd ed. Bernard Becker, M.D., and Robert N. Shaffer, M.D., F.A.C.S. Price, $18.50. Pp. 443, with 228 illustrations and 5 plates in full color. St. Louis: Mosby, 1965.

The second edition of this standard reference text on glaucoma succeeds the first edition of 1961.

The main justification for the second writing appears in the new information on genetic and familial aspects of glaucoma, particularly as related to the pharmacogenetics of the corticosteroids. Another important addition is a chapter on gonioscopic examples, with drawings and case histories. However, in discussing aqueous humor dynamics, the authors overlook all of the basic biochemical and physiological studies done with the cardiac glycosides and the enzyme system called sodium-potassium activated adenosinetriphosphatase, but include their own experiments which were done some 2 years later. Further, other theories of aqueous humor formation that have little merit and less proof are outlined in detail.

The basic format of the first edition has been retained, however. In the purely clinical sphere, there is new information on drug-induced glaucoma, congenital anomalies and glaucoma, rubella keratitis, and the uses of glycerol and cyclocryotherapy. The most important question in glaucoma today, that of the relation between pressure elevation and commencement of field loss, remains unanswered.

In general, this text remains the standard reference work on glaucoma. It demands careful reading and thoughtful analysis by all serious students of the disease.

Kenneth A. Simon, M.D.

Respiratory Care. H. H. Bendixen, L. G. Egbert, J. Hedley-Whyte, M. B. Laver, and H. Pontoppidan. Price, $15.00. Pp. 252, illustrated. St. Louis: Mosby, 1965.

These 5 specialists, from the Respiratory Unit and the Anesthesia Laboratory of the Harvard Medical School at the Massachusetts General Hospital, cooperated to bring together this book. It represents a unique approach to the problem of respiratory care in that it relates the experience of a unit in the Massachusetts General Hospital which was specifically designed to meet the needs of the patient requiring expert assistance in breathing under a wide variety of circumstances. As noted in the Foreword, the cost of maintaining the patient in this unit is high, amounting to $150.00 per day, but this is certainly justified in life-saving situations.

The book is appropriately divided into 5 parts, is well illustrated, and includes a generous list of up-to-date references. Part I, Physiological Considerations, presents an excellent review of respiratory physiology and mechanisms which come into play under the different conditions leading to respiratory insufficiency.

Part II, which relates to the diagnosis of respiratory insufficiency, is not easy reading for those who are not thoroughly familiar with the terminology of the respiratory physiologists. While the authors no doubt have made an honest attempt to present the material in a manner which the average practicing physician might understand, the complexity of the calculations makes a strong background in mathematics a very useful asset in fully understanding this section of the book. They present an excellent review and practical considerations of the interpretation of the data on blood gas and acid base measurements. Several nomograms and tables are provided to aid in the calculation and interpretation of pulmonary function data, which are very useful features.

Parts III and IV have to do with prevention and therapy, respectively. Both should be common knowledge to all physicians and especially those dealing with surgical problems and patients with chronic lung disease. In Part IV is presented an excellent treatise on the indications, techniques and especially on the care of the tracheostomy. The principles these authors set forth on this subject should be widely publicized to all of those who are in contact with the tracheostomy patient.

Part V deals briefly with specific problems and presents a wide variety of circumstances requiring respiratory assistance and gives the appropriate management of each. It would serve as an excellent guide to those who encounter such problems only occasionally. The importance of blood gas and pH measurements is emphasized repeatedly. Clinical judgment alone is not sufficient to adequately care for the patient with severe respiratory insufficiency. The topics discussed include neurological problems, acute poisoning, thoracic and cardiac surgery, obstructive lung disease, and many others.

Finally, the book presents a new concept in patient care which is certain to be more widely adopted by clinical centers in much the same manner as intensive care units and specialized cardiac care units. The book is well recommended, but the price of $15.00 for such a short treatise will probably deter many prospective readers.

Thomas G. Shelton, M.D.

Gastroenterology, Volume III, 2nd ed. Henry L. Bockus, M.D., and Present and Former Colleagues at the University of Pennsylvania Graduate School of Medicine and School of Medicine. Price, $30.00. Pp., 1352, illustrated. Philadelphia: Saunders, 1965.

The almost quarter century from 1943 to 1965 has shown tremendous advances in all branches of medicine, and none greater than in gastroenterology. In this period of achievement a great contribution has been the almost complete rewriting of the third volume of Gastroenterology by Bockus and his collaborators. This monumental work is profound and detailed in its ap-

(Continued on page 38)

when the feeling of guilt overwhelms

NORPRAMIN®
(desipramine hydrochloride)
non-sedating • rapid-acting
ANTIDEPRESSANT

overcomes guilt, lifts depression, restores confidence

Feelings of guilt, worthlessness, emptiness and loss frequently characterize depression. Such feelings, along with insomnia, physical complaints, sadness, apprehension, and other symptoms of depression rapidly respond to Norpramin (desipramine hydrochloride). Improvement often begins in 2-5 days, sometimes in less. A few patients, sensitive to central nervous system stimulants may become restless as depression is lifted—in such cases dosage may be reduced or a tranquilizer added.

Indications: In depression of any kind—neurotic and psychotic depressive reactions; manic-depressive or involutional psychotic reactions. **Dosage:** Optimal results are obtained at a dosage of two 25 mg. tablets t.i.d. (150 mg./day). **Contraindications and Precautions:** Glaucoma, urethral or ureteral spasm, recent myocardial infarction, severe coronary heart disease and epilepsy. Should not be given within two weeks of treatment with a monoamine oxidase inhibitor. Safety in human pregnancy has not been established. **Adverse Effects:** Side effects, usually mild may include: dry mouth, constipation, dizziness, palpitation, delayed urination, "bad taste," sensory illusion, tinnitus, agitation and stimulation, sweating, drowsiness, headache, orthostatic hypotension, flushing, nausea, cramps, weakness, blurred vision and mydriasis, rash, allergy, transient eosinophilia, granulopenia, altered liver function, ataxia and extrapyramidal signs. **Supplied:** Norpramin (desipramine hydrochloride) tablets of 25 mg., in bottles of 50, 500 and 1000.

LAKESIDE LABORATORIES, INC., Milwaukee, Wisconsin 53201

LAKESIDE

PRODUCTS
FOR PATIENTS
YOU SEE
EVERY DAY

Book Reviews

(*Continued from page 36*)

proach to a subject which is assuming greater importance with the passing years. The integrity of the author and his collaborators shows a willingness to draw upon their personal experiences, and this second edition of Gastroenterology is a must for any serious student of medicine. As a source of reference in any gastroenterological problem, it is outstanding. The best proof of its value has been the acclamation of the first edition around the world for its unique and precise presentation of all subjects relating to primary or secondary gastroenterological subject material. This all had to be initiated by a recognized leader in his field, and no one is more gifted and without peer than Dr. Henry Bockus, who, with the assistance of his contributors, has accomplished his goal of succinct but comprehensive coverage of gastroenterology. It has wisdom and authority in every chapter, and everyone connected with this important revision should feel a sense of great gratification for its contribution to medicine.

As our world becomes relatively smaller in all phases of life, due to increased international travel and communication, the need for such an encyclopedia of medical knowledge is evident. And it is interesting to note that in Volume III more emphasis has been given to a discussion of parasitic diseases, which is understandably important in our present world-wide associations and commitments.

FRED A. J. GEIER, M.D.

Symposium on Cataracts. Transactions of the New Orleans Academy of Ophthalmology. BENJAMIN F. BOYD, M.D.; LEONARD CHRISTENSEN, M.D.; A. RAY IRVINE, JR., M.D.; MURRAY F. MCCASLIN, M.D.; P. ROBB MCDONALD, M.D.; JOHN M. MCLEAN, M.D.; AND RICHARD C. TROUTMAN, M.D. Price, $19.50. Pp. 340, illustrated. St. Louis: Mosby, 1965.

This Symposium is a most practical collection of the ideas and clinical practices of 7 outstanding authorities and covers the subject from congenital cataracts to the special refraction problems in aphakic patients. Each of the 7 contributors, Drs. Boyd, Christensen, Irvine, McCaslin, McDonald, McLean, and Troutman, present several aspects of the subject. These presentations are followed by 40 pages of round table discussions and answers to questions from the floor. The pleasant informality can be misleading; a steady flow of practical information is found in the smoothly edited text. There is a refreshing minimum of references.

The chapter on High Magnification in Surgery of Cataracts by Dr. Troutman provides much information on the advantages and disadvantages of the presently available instruments. The rewards and difficulties of microsurgical techniques are also discussed.

Dr. McLean's chapter on Cataract Surgical Technique should be read by anyone doing cataract surgery. His comment on cryosurgery keynotes his conservative approach: "Cryo-extraction, or conversion of the cataract to a partial ice ball frozen to a supercooled probe, is an interesting stunt but seems to have little to recommend it."

This book is a pleasure to read and is highly recommended to anyone interested in cataract surgery.

C. W. SPRUNT, M.D.

Radiologic Diagnosis in Infants and Children. ARMAND E. BRODEUR, M.D., M.RD., F.A.C.R. Price, $26.50. Pp. 503, with 757 illustrations. St. Louis: Mosby, 1965.

This book represents the first American text on this subject since Caffey's classic "Pediatric Radiology." It should prove useful to those who are interested in this specialty.

Some of the descriptive text is too brief. However, the radiographic reproductions are excellent. Such illustrations are "worth a thousand words." The author glosses over some controversial subjects, e.g., peptic ulcer in children and hiatal hernia in infants.

The organization of the text follows a time-honored one, starting with the skull and proceeding through various systems. The section dealing with the anatomy and pathology of the mandible was written by Richard J. Parmley, D.D.S. This represents one of the finest discussions of mandibular lesions which this reviewer has had the pleasure to peruse.

At the end of each section a short summary entitled "Pitfalls in Diagnosis" has been included. This is a novel and valuable feature. Dr. Brodeur has provided information for the inexperienced which could only have been gleaned from years of application. Those of us who limit ourselves to pediatric radiology have learned many of these "pitfalls" by trial and error.

Two facts included in Dr. Brodeur's text deserve emphasis:

1. The value of air as a contrast material in high congenital intestinal obstructions, and
2. The return to barium sulfate mixtures in preference to aqueous preparations.

This reviewer recommends "Radiologic Diagnosis in Infants and Children." It should be in the library of all physicians who have an interest in this field.

JOSEPH M. LOPRESTI, M.D.

Ciba Foundation Study Group No. 20: Functions of the Corpus Callosum. E. G. ETTLINGER, M.A., Ph.D., Editor and Organizer; A. V. S. DEREUCK, M.Sc., D.I.C., AND RUTH PORTER, M.R.C.P., Editors for the Ciba Foundation. Price, $3.75. Pp. 156, with 28 illustrations. Boston: Little, 1965.

This is a continuation in the series of books reviewing symposia on pertinent medical topics, all of which have been sponsored by the Ciba Foundation. The present short monograph details a meeting held in London in September, 1964, under the chairmanship of Professor D. Whitteridge, a pupil of Lord Adrain, in whose honor the symposium was held.

In general, it discusses the role of the great forebrain structures, particularly the corpus callosum and

Continued on page 40

In colicky infants Pediatric Piptal with Phenobarbital slows down spasm, diminishes pain and crying and improves feeding patterns. It permits sleep and rest for patient and family. The less than hypnotic amount of phenobarbital in the recommended dose affords a mild, calming action and enhances the antispasmodic action of Piptal (pipenzolate bromide). The latter drug, as reported in the medical literature, has a favorable ratio of effectiveness to side-effects which is unusual in anticholinergics and thus is particularly appropriate to pediatric use.

QUIETS PHONES
QUIETS PARENTS
QUIETS **COLIC**

PEDIATRIC PIPTAL® WITH PHENOBARBITAL

each cc. contains 6 mg. phenobarbital (warning: may be habit forming); 4 mg. Piptal® (pipenzolate bromide), and 20% alcohol.

Pleasant-tasting Pediatric Piptal with Phenobarbital is miscible in milk, formulas and fruit juices, and may also be given by dropper directly on the infant's tongue. Dosage is 0.5 cc. 15 minutes before feeding; in severe cases, 1.0 cc. four times daily. High doses may occasionally cause constipation with tenesmus and, rarely, flushing without fever. It is contraindicated in bowel obstruction or sensitivity to phenobarbital or anticholinergics. Available in 30 cc. dropper bottles, droppers calibrated to deliver 0.5 cc.

LAKESIDE LABORATORIES, INC., Milwaukee, Wisconsin 53201

LAKESIDE

PRODUCTS
FOR PATIENTS
YOU SEE
EVERY DAY

Book Reviews

(*Continued from page 38*)

anterior commissure and their relationship to behavior. There are 10 formal papers and associated discussions covering intrahemispheric transfer of sensory information and relationships to condition reflexes and memory. In particular, the visual, somesthetic, auditory, and epileptic transfer mechanisms are considered. Of special interest was the psychological and neurological data of 3 cases of congenital agenesis of the corpus callosum, all of which showed varying cortical associative type dysfunctions, although the authors apparently preferred not to get involved with relating the terms aphasia, apraxia, and agnosia to their present findings except by inference. Later, however, others discussed a syndrome of pure alexia and a color-naming disturbance without agraphia seen in a posterior callosal lesion.

It is hoped that such a symposium will stimulate further investigation along these lines and add to a greater understanding of these major forebrain commissures and the role they play in sensory reception, sensory integrated processes, and coördination. Because of the detailed basic science nature of this book, which predisposes postgraduate training along these lines, I would not recommend it for the average medical practitioner. I believe it outlines recent facts and proposes theories that should be known to the clinical neurologist, neurosurgeon, and psychiatrist, but most of all for those working in the related fields of neurophysiology, neuroanatomy, and experimental psychology.

George J. Lucas, M.D.

Twins: Twice the Trouble, Twice the Fun. Betsy Holland Gehman. Price, $4.95. Pp. 224. Philadelphia: Lippincott, 1965.

The author draws from her own personal experience and the experience of parents of other twins, as well as from twins themselves, on the many facets concerning twins. This book is a compilation of ideas, suggestions and philosophy of taking care of twins that is written for the new mother of twins. There are interesting chapters on history of twins, twin lore, and the discussion of identical versus fraternal twins.

The chapters on methods of feeding, organizing and safety measures certainly give good advice to the new mother. There are interesting anecdotes from living twins, and some reactions of parents on twins and twins on parents are described.

All in all, the author, who is a nonmedical person, has supplied a book which should help any new mother who is faced with twin births. While precise scientific facts are lacking for some of the suggestions, the stress on individual identity is certainly well deserved.

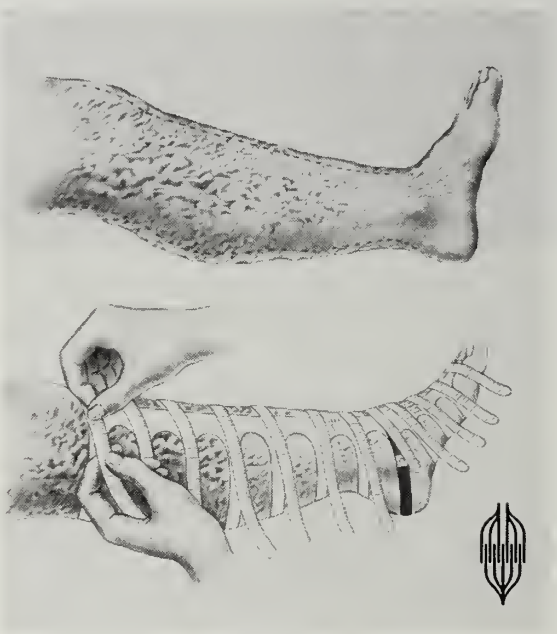
Milton M. Greenberg, M.D.

EACH PATIENT
is precisely measured for a Jobst support.

Jobst venous pressure gradient supports are custom-made from precise measurements of your patient's extremity. Each support is individually engineered to exert the correct counter pressure according to your diagnosis and each support is guaranteed to fit, no strangulation, no puddling, no tourniqueting. Our service center is staffed with experts who will measure and fit your patient on your prescription only.

There is no charge for this service. Here is an advanced, clinically proved program of treatment for vascular deficiencies. For prescription blanks and medical reprints, have your secretary phone or drop us a card. Jobst Service Center 818 Eighteenth St. N.W. Phone: 298-5530 Washington, D. C. 20006

©1966 Jobst



Thanks to Dexamyl®

brand of
dextroamphetamine
sulfate and amobarbital

she can say "No thank you" to the crêpe suzette.

'Dexamyl' does more than most anorectics. Because it curbs appetite *and* lifts mood, 'Dexamyl' can encourage the discouraged dieter to stay on her diet.

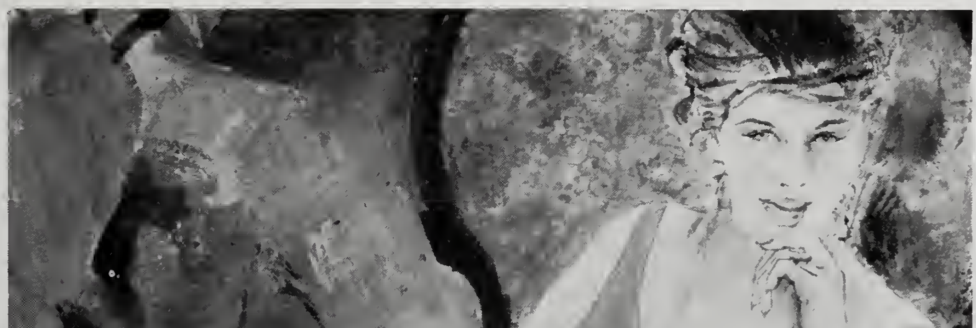
The mood lift with 'Dexamyl' can make the difference between the success or failure of her diet plan.

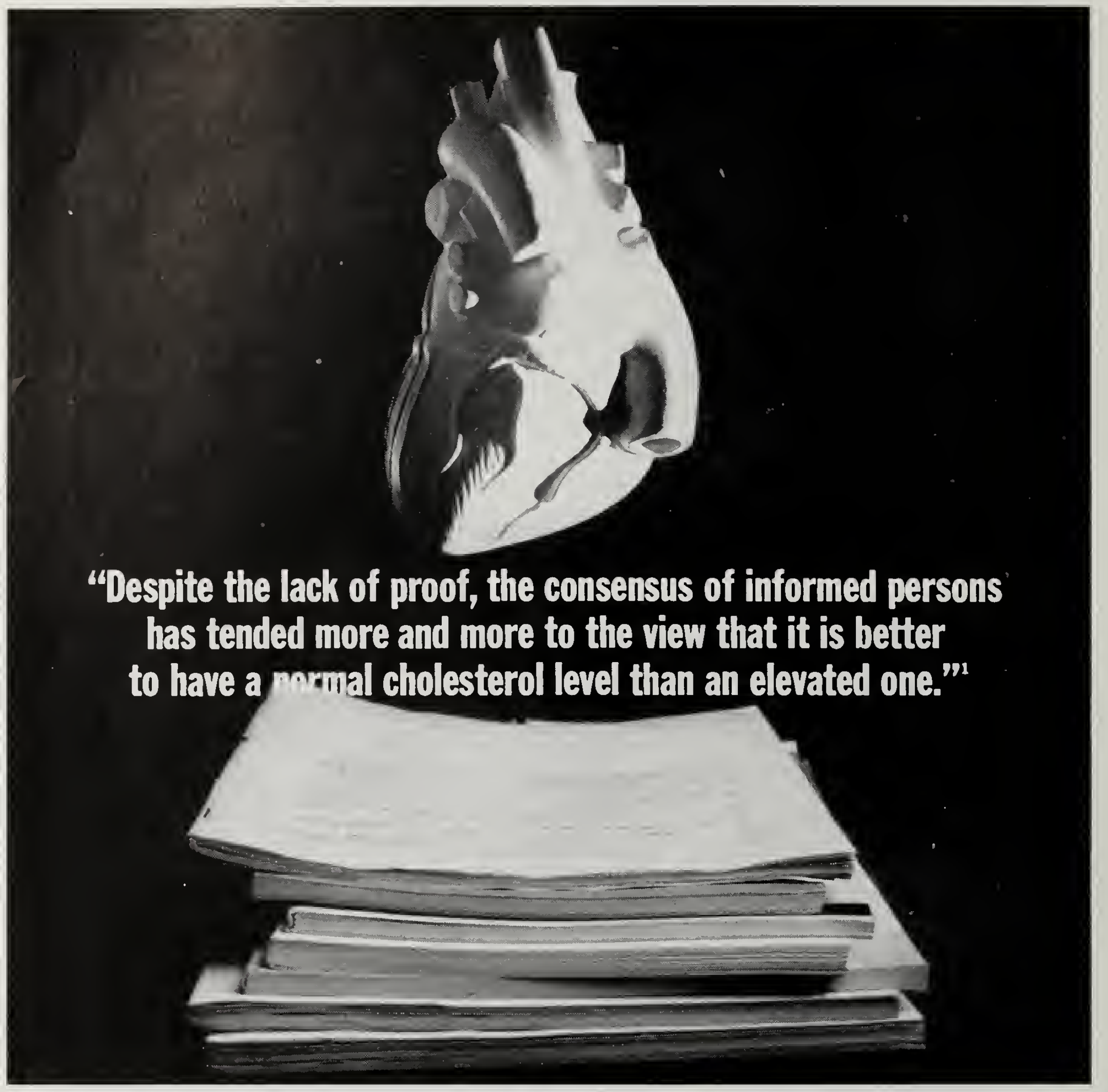
Formulas: Each 'Dexamyl' Spansule® Capsule (brand of sustained release capsule) No. 1 contains 10 mg. of Dexedrine® (brand of dextroamphetamine sulfate) and 1 gr. of amobarbital, derivative of barbituric acid [Warning, may be habit forming]. Each 'Dexamyl' *Spansule* capsule No. 2 contains 15 mg. of Dexedrine (brand of dextroamphetamine sulfate) and 1½ gr. of amobarbital [Warning, may be habit forming].

Principal cautions and side effects: Use with caution in patients hypersensitive to sympathomimetics or barbiturates and in coronary or cardiovascular disease or severe hypertension. Insomnia, excitability and increased motor activity are infrequent and ordinarily mild.

Before prescribing, see SK&F product Prescribing Information.

Smith Kline & French Laboratories SK&F




"Despite the lack of proof, the consensus of informed persons has tended more and more to the view that it is better to have a normal cholesterol level than an elevated one."[1]

THE DRUG TO LOWER CHOLESTEROL…

NICALEX®

(ALUMINUM NICOTINATE)

☐ Reduces cholesterol by 15-30% in most patients[2]

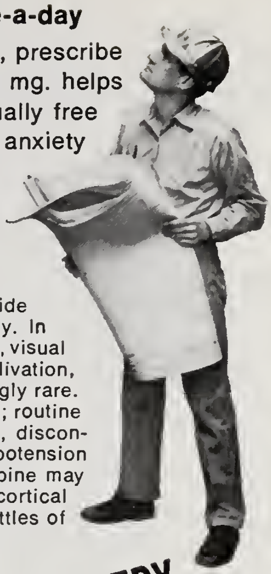
☐ Matches nicotinic acid in effective reduction of elevated serum lipids—but with minimized tendency to cause flushing[3]

☐ Simpler, more practical than diet[1]

WALKER Laboratories

Division of Richardson-Merrell Inc., Mount Vernon, New York 10551

NICALEX Prescribing Information: COMPOSITION: Each tablet contains: Aluminum Nicotinate 625 mg.—a complex consisting of (approx.): Aluminum Hydroxydinicotinate 450 mg. and Nicotinic Acid 155 mg. (Equivalent in activity to Nicotinic Acid 500 mg.) INDICATIONS: The primary indications for NICALEX (Aluminum Nicotinate) are to reduce the serum cholesterol and total lipid levels in hypercholesteremia and hyperlipemia. It may also be useful in reducing xanthomatous tissue cholesterol deposits. PRECAUTIONS AND WARNINGS: Patients with peptic ulcer, liver, or gallbladder disease should be observed closely while taking the medication. Diabetic patients may require adjustment of diet and insulin dosage in the event of decreased tolerance. Patients receiving anti-hypertensive drugs of the adrenal-blocking type should be watched for signs of postural hypotension. Occasional side effects of Nicotinic Acid in large dosage are decreased glucose tolerance (resembling diabetic-type curve) sometimes with glycosuria, temporary activation of peptic ulcer, transient jaundice, and metabolic disturbance of liver function without definite hepatic pathology. These side effects were found to be reversible upon discontinuing nicotinic acid therapy. Certain transitory skin changes have been observed with nicotinic acid therapy. These include: dryness of the skin and keratosis nigricans, particularly in axillae. SIDE EFFECTS: Administration of NICALEX (Aluminum Nicotinate) may produce temporary flushing and pruritus, also mild gastrointestinal distress, but these reactions are transient and apparently not serious. DOSAGE: The adult dose is 2 to 4 tablets t.i.d. with meals. HOW SUPPLIED: In bottles of 100 and 1000. CAUTION: Federal law prohibits dispensing without prescription. REFERENCES: 1. Parsons, W.B., Jr., Mayo Clin. Proc., 40:822, 1965. 2. Goldsmith, G.A., Amer. J. Dig. Dis., 9:651, 1964. 3. Boyle, E., Jr., J. Amer. Geriat. Soc., 10:822, 1962. U.S. Patent 2,970,082



Blueprint for dealing with tension due to stress — Prolixin — once-a-day

For the patient who must be on the job mentally as well as physically, prescribe Prolixin. The prolonged tranquilizing action of as little as one or two mg. helps him cope with tension all day long. Markedly low in toxicity and virtually free from usual sedative effects, Prolixin is effective in controlling both anxiety associated with somatic disorders and anxiety due to environmental or emotional stress. Patient acceptance is good — because Prolixin is low in cost, low in dosage and low in sedative activity. Prescribe Prolixin.

Side Effects, Precautions, Contraindications: As used for anxiety and tension, side effects are unlikely. Reversible extrapyramidal reactions may develop occasionally. In higher doses for psychotic disorders, patients may experience excessive drowsiness, visual blurring, dizziness, insomnia (rare), allergic skin reactions, nausea, anorexia, salivation, edema, perspiration, dry mouth, polyuria, hypotension. Jaundice has been exceedingly rare. Photosensitivity has not been reported. Blood dyscrasias occur with phenothiazines; routine blood counts are recommended. If symptoms of upper respiratory infection occur, discontinue the drug and institute appropriate treatment. Do not use epinephrine for hypotension which may appear in patients on large doses undergoing surgery. Effects of atropine may be potentiated. Do not use with high doses of hypnotics or in patients with subcortical brain damage. Use cautiously in convulsive disorders. **Available:** 1 mg. tablets. Bottles of 50 and 500. For full information, see Product Brief.

WHEN TRANQUILIZATION WITHOUT SEDATION IS DESIRABLE, TRY

PROLIXIN®

THE SQUIBB TRANQUILIZER

SQUIBB FLUPHENAZINE HYDROCHLORIDE

SQUIBB Squibb Quality — the Priceless Ingredient

Westbrook Psychiatric Hospital, Inc.

FOUNDED 1911

Richmond, Virginia

A private psychiatric hospital employing modern diagnostic and treatment procedures—electro shock, insulin, psychotherapy, occupational and recreational therapy—for nervous and mental disorders and problems of addiction.

REX BLANKINSHIP, M.D.
President

JOHN R. SAUNDERS, M.D.
Medical Director

THOMAS F. COATES, JR., M.D.
Assistant Medical Director

J. McDERMOTT BARNES, M.D.
Associate

R. H. CRYTZER
Administrator

BROCHURE OF LITERATURE AND VIEWS SENT ON REQUEST
write to:

WESTBROOK PSYCHIATRIC HOSPITAL, INC.
P. O. Box 1514, Richmond 27, Virginia
Telephone 266-9671

Planned and operated by Physicians—OPEN STAFF policy

Magnolia Gardens Nursing Home

Serving the Greater Washington Area

Specializing in long-term or acutely ill cases, also care during working hours, limited stays for vacation periods. Administered by Registered Nurse, 24-hour professional nursing service. Dietician-controlled meals, physio- and occupational therapy programs.

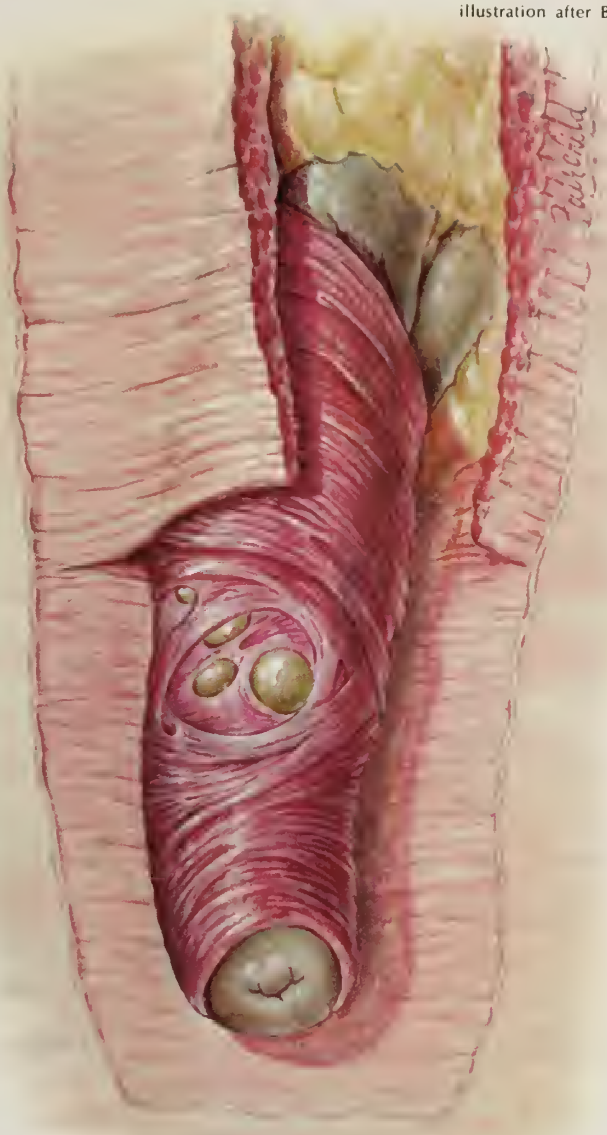
Your patient is assured medical supervision at all times. In an emergency doctors are on call to carry out your instructions until you personally can attend your patient.

Constructed 1964; completely fireproof; safety features. Gracious living, with attractive lounges, sundecks, chapel, cheery diningroom, homelike bedrooms. Outside gardens and patios for your patients' pleasure.

Illustrated brochure sent on request

9104 Good Luck Road—Lanham, Maryland
Capital Beltway—Exit #30 East-Route 450 PHONE 552-2000
Take next immediate left at Princess Garden Parkway 1 mile to Nursing Home

illustration after Boyden



HOW IMPORTANT IS THIS

IN YOUR DIAGNOSES OF SMOOTH MUSCLE SPASM?

ilips Roxane, Inc.

PERHAPS VERY IMPORTANT

The sphincter of Oddi is made up primarily of smooth muscle fibers. It permits the gall bladder to fill, regulates the flow of bile and pancreatic enzymes and in dysfunction is a primary cause of Biliary Dyskinesia. The sphincter of Oddi is but one of five major foci of smooth muscle spasm where SPACOLIN® (Alverine citrate) acts directly with rapid onset and long duration. No neurotropic side effects because Spacolin is a musculotropic counter-spasmodic unrelated to atropine or atropine-like drugs. Spacolin is not contraindicated in prostatic hypertrophy.

SPACOLIN® (Alverine citrate)

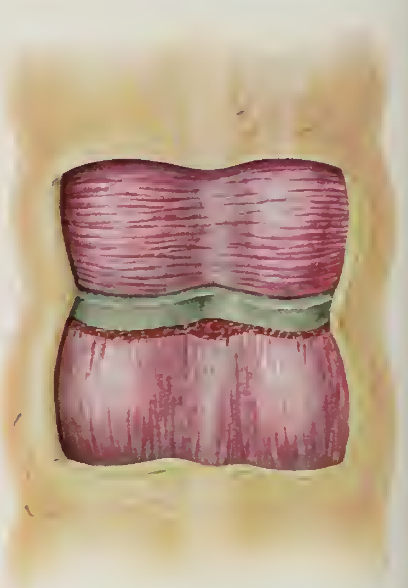
Each tablet contains: Alverine citrate .... 120 mg.

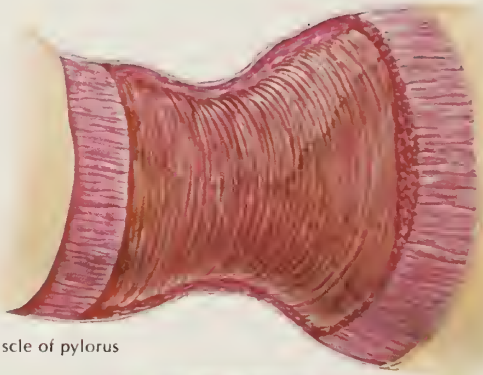
INDICATIONS: Smooth muscle spasmolytic for use in spastic colon, spastic conditions of the gastrointestinal tract, biliary dyskinesia, cholecystitis, spasm associated with peptic ulcer,* achalasia, pylorospasm, spasm attendant to diarrhea, spastic conditions of the genitourinary tract attributable to inflammation and calculi, certain primary dysmenorrheas and as an aid in cystoscopic, esophagoscopic and gastroscopic examinations. DOSAGE: One tablet after meals 1 to 3 times daily at discretion of physician. When treating spasm associated with peptic ulcer, achalasia or pylorospasm, administer tablets ½ hour before meals. In dysmenorrhea, one tablet 3 times daily starting at onset of discomfort. PRECAUTION: Caution is recommended when using in hypotensive patients. SIDE EFFECTS: In common with other smooth muscle depressants, Spacolin temporarily lowers blood pressure.

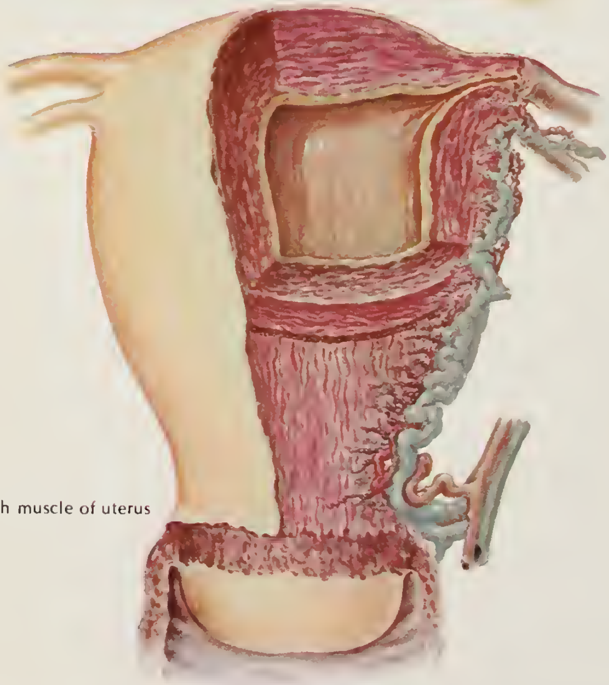
*Antacid and dietary measures are of primary importance in ulcer treatment and should not be neglected.

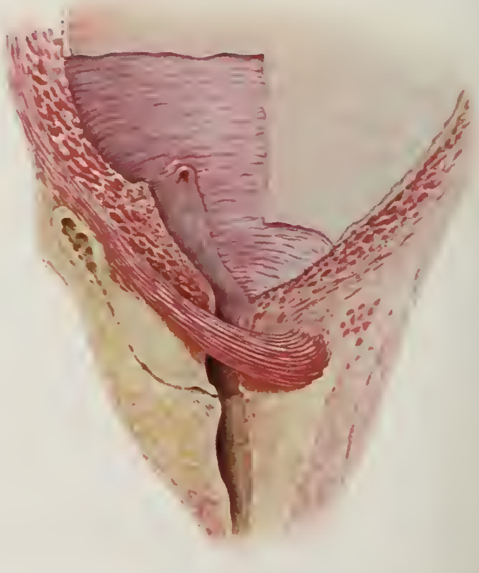
PHILIPS ROXANE LABORATORIES Division of Philips Roxane, Inc.,
Columbus, Ohio

smooth muscle sphincter of Oddi


smooth muscle of colon


smooth muscle of pylorus


smooth muscle of uterus


smooth muscle of urinary bladder

BEUCHLER'S
915-19th Street, N.W. Republic 7-6006

THE GIBSON COMPANY
60 years serving the medical profession
922 19th Street, N.W.
Federal 8-2688
Medical and Surgical Supplies
Hospital, Invalid and Sickroom Supplies
Surgical Fitting Specialists—Man and Woman
Private Fitting Rooms

MAXWELL
AND
TENNYSON
INC.
PHARMACISTS
"Where Pharmacy is a Profession"
Washington, D. C.
1801 Eye Street NAtional 8-0206
1835 Eye Street STerling 3-0360
1726 Eye Street 298-6540
Prescriptions called for and delivered without extra charge
Biologicals–Vaccines
Serums
Hypo-Allergenic Cosmetics

In the Chevy Chase Area
FOR THE BEST IN DRUGS AND SERVICE
IT'S
HIGGER'S
ESTABLISHED 1930
Complete Biological Stocks
HIGGER'S DRUGS, INC.
5015-17-19 Connecticut Avenue
Phone: Woodley 6-1815
Note: Special physicians' phone to Prescription Department: Woodley 6-5555

Spring Garden Salad
Sealtest
COTTAGE CHEESE
Spring Garden Salad Cottage Cheese

Serving the Doctors of Metropolitan Washington
Since 1942
PROFESSIONAL BUSINESS MANAGEMENT, INC.
John C. Post, *President*
A Personal Service Designed to Assist the Doctor with the Business Side of Medical Practice.
• *Medical Management Specialists* •
1012 20th Street, N.W Washington, D.C. 20036 Tel. FEderal 8-3200

CLASSIFIED ADVERTISEMENTS

Advertisements under the following headings are charged at the rate of $5.00 for one insertion of 50 words or less; $4.00 each for three insertions; and $3.00 each for six insertions or more. All advertisements are payable in advance; the Editorial Board reserves the right to edit copy. Closing date for new copy, 15th of month preceding date of issue.

Classified advertisements of a professional nature are free to members.

SITUATIONS WANTED

LOCUM TENENS: Woman physician, licensed in D.C., desires to substitute for vacationing physician. Midwest experience in GP and internal medicine; 18 months, to present, in Swiss sanitarium. Available May 15 for 3 months. Telephone James Finucane, Emerson 3-0145 after 6 p.m., or address Box 65, 2007 Eye Street, N.W., Washington, D.C. 20006.

PATHOLOGIST, Board-certified (PA), age 33, seeks position in Washington or environs. Research experience; University-trained; publications. Interested in providing small hospital coverage or part-time association with established pathologist. Address Box 60, 2007 Eye Street, N.W., Washington, D.C. 20006.

INTERNIST, 2 years hematology, age 33, military service completed, desires association or group practice opportunity in Washington, D.C. area beginning July 1966. Address Box 98, 2007 Eye Street, N.W., Washington, D.C. 20006.

INTERNIST, Board-eligible, available for part-time assistance with practice in office or house calls. Address Box 92, 2007 Eye Street, N.W., Washington, D.C. 20006.

RADIOLOGIST, Board-certified, university trained, assistant professor; age 32, married; licensed in D.C. and Maryland, desires private practice opportunity or equal group association. Address Box 69, 2007 Eye Street, N.W., Washington, D.C. 20006.

PHYSICIANS WANTED

MEDICAL OFFICER (GENERAL): Federal career Civil Service; $15,170 annum; U.S. citizen. Moving expenses paid. Adjudication of claims and disability retirement. Determinations based on reports of medical examinations. Some emergency care of ill and injured employees. Send résumé to Director of Personnel, Civil Service Commission, Washington, D.C. 20006. Investigation required. Nondiscriminatory employment.

PHYSICIANS for Emergency Department—full-time, guaranteed income—in 800-bed teaching hospital. D.C. licensure required. Apply Administrator, Washington Hospital Center, 110 Irving Street, N.W., Washington, D.C. 20010.

STAFF PHYSICIAN for medical publishing firm. Excellent opportunity for doctor who needs slower pace. Five-day week. Graduate Class A school, good command of English, foreign language desirable. Work largely administrative and supervisory. Partial disability not disqualifying. Send résumé to Box 77, 2007 Eye Street, N.W., Washington, D.C. 20006.

HOUSE OFFICERS: All positions in 380-bed Community Hospital. ECFMG necessary. Excellent salary. Contact Medical Director, The Morris Cafritz Memorial Hospital, 1310 Southern Avenue, S.E., Washington, D.C. 20032.

PHYSICIAN for responsible position in clinical research and development activities of large Midwestern chemical company. Ability to communicate effectively with other medical and technical people essential. Excellent career potential in internal medicine or dermatology. An equal opportunity employer. Send resume to Box 81, 2007 Eye Street, N.W., Washington, D. C. 20006.

PRACTICE FOR SALE

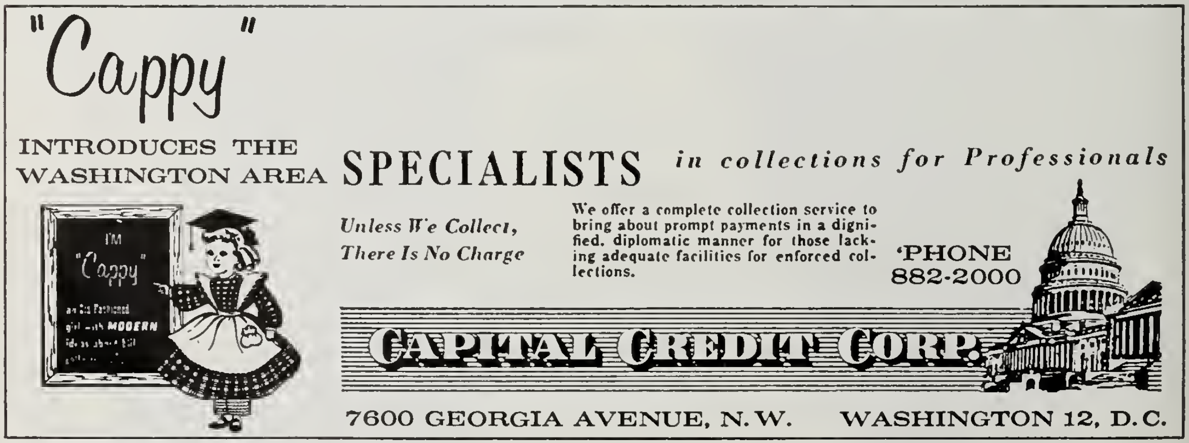
INTERNAL MEDICINE: Internist in practice for over 30 years with subspecialty in gastrointestinal diseases. Equipment and active patient records. Address Mrs. Leo T. Brown, 1621 New Hampshire Avenue, N.W., Washington, D. C. 20009 or telephone Dupont 7-7722.

REAL ESTATE

FOR SALE: Doctor's combined home-office at American University Park, just off Massachusetts Avenue busline. Fully equipped office with separate entrance, reception, consultation and examining rooms, bath. Present physician will introduce. Immaculate, air-conditioned, brick split-level home. Excellent terms. For details telephone Mrs. Sherman, Emerson 3-5282.

OFFICE SPACE AVAILABLE

FOR LEASE: Gresham Medical Offices, 2833 Georgia Avenue, N.W., adjacent to Howard University campus. Very desirable 4-room suite with private lavatory and use of spacious reception foyer. Modern facilities; air-conditioned offices. Rental $195 month plus electricity. Contact Charles M. Schneider, Realtor, 927 15th Street, N.W., telephone 347-1679.



"Cappy"

INTRODUCES THE WASHINGTON AREA SPECIALISTS *in collections for Professionals*

Unless We Collect, There Is No Charge

We offer a complete collection service to bring about prompt payments in a dignified, diplomatic manner for those lacking adequate facilities for enforced collections.

'PHONE 882-2000

CAPITAL CREDIT CORP.

7600 GEORGIA AVENUE, N.W. WASHINGTON 12, D.C.

Classified Advertisements (*Continued*)

FOR LEASE: 4900 BUILDING on Indian Head Highway, Oxon Hill, Prince George's County, Md., in center of densely populated Glassmanor, Eastover, and Forest Heights areas. First and second floor space for immediate occupancy; new, air-conditioned building; private parking for 55 cars. Telephone GEO. S. KING CO., LU 4-2501.

FOR RENT: Premium office space; excellent location, 1 minute from Holy Cross Hospital in one of busiest traffic areas in town. Suite can be designed to specifications. For details inquire of DR. MILTON M. KOGAN, Juniper 5-3290.

TO SHARE: Internist will share 875 sq. ft. suite and facilities, designed for 2 specialists, in new, downtown medical office building. Ideal location and facilities for internist beginning practice. For further information telephone 298-6520.

TO SHARE: In NORTH BETHESDA MEDICAL PARK: very attractive offer, especially for young physician just beginning practice. Ample free parking. Address Box 32, 2007 Eye Street, N.W., Washington, D.C. 20007.

TO SHARE: Surgeon at 1150 Connecticut Avenue wishes to share office space. Separate consultation and examining rooms. Telephone Metropolitan 8-0387.

FOR RENT: Available in fall 1966, offices in new UNIVERSITY MEDICAL BUILDING now under construction at 2143 K Street, N.W. Suites custom-designed to meet needs of physicians and patients. Some choice locations still available. Telephone MR. MORRISON, Shannon & Luchs Company, 900 17th Street, N.W., 296-2345.

FOR RENT: NEW MEDICAL BUILDING, 1726 Eye Street, N.W. Ideal space available for general practitioner or specialist. Large suite for dentist also available. All utilities included plus switchboard service and central air-conditioning; parking available. Telephone 298-6936.

TO SHARE: Surgeon in modern medical building in suburban Virginia wishes to share offices; joint reception room, private consultation room. Address Box 30, 2007 Eye Street, N.W., Washington, D. C. 20006.

TO SUBLET: Internist's offices downtown, in modern building, beginning July. X-ray room included. Equipment available. Reasonable rent. Write or telephone DR. MAURICE A. SISLEN, 1712 Eye Street, N.W., Washington, D. C. 20006; telephone 298-8433.

FOR RENT: Office space, approx. 750 sq. ft., available immediately in NEW DOCTORS BUILDING, 1712 Eye Street, N.W. Telephone 298-7055, MR. SMITH or MRS. BRITO.

TO SHARE: Large, equipped private office, with parking facilities, in choice D. C. location. Reasonable rent. Telephone Decatur 2-7641.

TO SHARE: Completely furnished offices, on first floor, in Langley Park, Md. Telephone 779-1700.

EQUIPMENT FOR SALE

EXECUTIVE DESK, ebony; CREDENZA, Stowe-Davis; ECG MACHINE with all attachments; disposable, sterile L-P SETS. Telephone 949-6574.

VACATION RENTALS

FOR RENT: New, modern beach house in quiet, residential neighborhood at Rehoboth Beach, Del.; 3 bedrooms, 2 baths. One or 2-week rental periods at reasonable rates. Off-season rates also available. For further information telephone JA-8-7335 evenings.

PHYSICIANS' PLACEMENT SERVICE

THE MEDICAL SOCIETY'S **Physicians' Placement Committee** maintains a service to benefit its members and other physicians by locating suitable openings, assistants or associates. It will also assist Government agencies and industrial organizations to secure physicians for their Medical Departments. Call 223-2230—ask for Mr. Trust.

"Registered Nurses—For Private Duty"

U. S. EMPLOYMENT SERVICE

PROFESSIONAL OFFICE

GRADUATE NURSES REGISTRY

SOLAR BUILDING
1000 16th St., N.W.—Room 705
WASHINGTON, D. C. 20212

CALL—DISTRICT 7-1129

24-hour telephone service—
7 days a week

CAPITAL NURSE REGISTRY

(Est. 1910)

Licensed Practical Nurses and Practical Nurses Recommended by Physicians

All Nurses Have Had Hospital Training

One of Washington's outstanding Registries, serving physicians and surgeons since 1910

LICENSED BY DISTRICT OF COLUMBIA

24 Hour Telephone Service

RAndolph 3-2600 or 3-1771

BOOKS RECEIVED

Acknowledgment is made of the following books which have recently been received.

Current Therapy 1966. Latest Approved Methods of Treatment for the Practicing Physician. Edited by Howard F. Conn, M.D., with 12 consulting editors. Price, $13.00. Pp. 857. Philadelphia: Saunders, 1966.

Disorders of Carbohydrate Metabolism in Infancy. Volume III in the Series: Major Problems in Clinical Pediatrics. Marvin Cornblath, M.D., and Robert Schwartz, M.D.; Alexander J. Schaffer, Consulting Editor. Price, $8.50. Pp. 297, illustrated. Philadelphia: Saunders, 1966.

Community Mental Health Services in Northern Europe—Great Britain, Netherlands, Denmark, and Sweden. Sylvan S. Furman. Written under contract with the U. S. Department of Health, Education, and Welfare, Public Health Service, National Institutes of Health, National Institute of Mental Health, Bethesda, Md. Price, $1.75. Pp. 215. Washington, D. C.: U.S. Government Printing Office, 1966.

Current Pediatric Therapy 1966–1967. Sydney S. Gellis, M.D., and Benjamin M. Kagan, M.D., editors, and 286 contributors. Price, $17.50. Pp. 956. Philadelphia: Saunders, 1966.

Pediatric Therapy, 2nd ed. Harry C. Shirkey, B.S. (Pharm.), M.D., F.A.A.P., editor, and 84 contributors. Price, $18.50. Pp. 1223, with 353 illustrations. St. Louis: Mosby, 1966.

History of the American Medical Writers' Association and Its Previous Associated Organizations. Volume I: History of the American Medical Writers' Association (Including the Mississippi Valley Medical Editors' Association). Harold Swanberg, B.S., M.D., F.A.C.P., Sc.D. Price, paper, $2.50. Pp. 236, illustrated. Quincy, Ill.: Society for Academic Achievement, 1965.

The Role of Psychiatry in Medical Education. An Appraisal and a Forecast. Sidney L. Werkman, M.D. Price, $4.75. Pp. 187. Cambridge, Mass.: Harvard, 1966.

Ciba Foundation Study Group No. 22: Gonadotropins: Physicochemical and Immunological Properties. Edited by G. E. W. Wolstenholme, O.B.E., F.R.C.P., F.I. Biol., and Julie Knight, B.A. Price, $3.50. Pp. 125, with 28 illustrations. Boston: Little, 1966.

Man and Africa. A Ciba Foundation Symposium, jointly with The Haile Selassie I Prize Trust under the patronage of His Imperial Majesty Haile Selassie I, Emperor of Ethiopia. Edited by Gordon Wolstenholme and Maeve O'Connor. Price, $7.50. Pp. 400, with 24 illustrations. Boston: Little, 1966.

KALORAMA CONVALESCENT HOME, INC.

Licensed by the D. C. Department of Licenses and Inspections

INSTITUTIONAL CARE

for the medical management of the acute stages of alcoholism.

2001 KALORAMA ROAD

at 20th Street, N.W. Adams 2-0063

OXYGEN

24-HOUR SERVICE

363–9595

I P P B

COMPRESSORS

OXYGEN

SALES

RENTALS

Inhalation Therapist on Duty

EM 3–9595

ACCREDITED SURGICAL CO.

Medical and Surgical Supplies

3226 Wisconsin Ave., N.W.

makes sleep irresistible

nidar®

EACH TABLET CONTAINS:

Pentobarbital Sodium	25 mg.
Secobarbital Sodium	25 mg.
Butabarbital Sodium	7.5 mg.
Phenobarbital	7.5 mg.

(WARNING: MAY BE HABIT FORMING)

ARMOUR PHARMACEUTICAL COMPANY
Chicago, Illinois, U.S.A.

nidar®

Sleep comes easy...lingers...departs naturally

Gentle doses of 4 barbiturates assure uninterrupted sleep

2 barbiturates act fast...in 20 to 30 minutes

2 long-range barbiturates come into play
to sustain sleep for up to 8 hours

Tiny amounts of individual barbiturates
means Nidar is well tolerated

Patients enjoy a refreshing, clear-headed wake-up

makes sleep irresistible

IN BRIEF:

EACH TABLET CONTAINS:

Pentobarbital Sodium	25 mg.
Secobarbital Sodium	25 mg.
Butabarbital Sodium	7.5 mg.
Phenobarbital	7.5 mg.

(WARNING: MAY BE HABIT FORMING)

Dosage: One or two tablets, one-half hour before bedtime.

Indications: For night-time sedation and refreshing sleep up to eight hours.

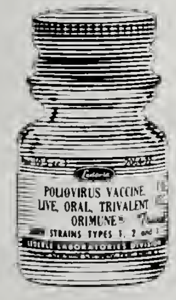
Contraindications: Patients sensitive to barbiturates. Use with caution in the presence of moderate to severe hepatic disease.

Supplied: Bottles of 100 tablets.

CAUTION: Federal law prohibits dispensing without a prescription.

ARMOUR PHARMACEUTICAL COMPANY
Chicago, Illinois, U.S.A.

Doctor...two important Lederle products for routine office procedures

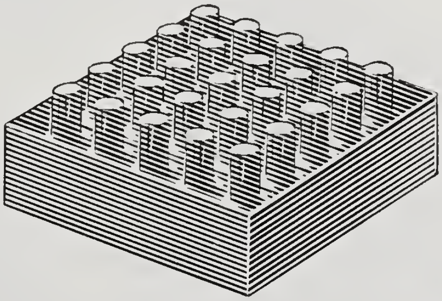


single-dose vials for convenient and economical polio immunization

ORIMUNE®
POLIOVIRUS VACCINE, LIVE, ORAL
TRIVALENT
SABIN STRAINS, TYPES 1, 2 and 3

Fast, simple administration—and economy for the patient—make the new 0.5 cc single-dose vial of ORIMUNE Trivalent ideal for private practice. (Packaged 5 to a box with 5 sterilized disposable droppers for your convenience).
(Also available in 2 cc and 2 drop dosage forms).
Only 2 doses required for complete, initial immunization for patients more than a year old.

Effectiveness—may be expected to confer active immunity against all three types of poliovirus infection in at least ninety percent of susceptibles only if given at full dosage, as directed. No characteristic side effects have been reported. There are, however, certain contraindications. These are, broadly: acute illness, conditions which may adversely affect immune response, and advanced debilitated states. In these, vaccination should be postponed until after recovery.
In infants vaccination should not be commenced before the sixth week of life. Do not give to patients with viral disease, or if there is persistent diarrhea or vomiting. ORIMUNE and live virus measles vaccine should be given separately.
Dosage—initial immunization: two doses each given orally at least 8 weeks apart. (Give a third dose to infants at 10-12 months). Booster immunization: one dose, given orally. See package literature for full directions.



simplifies routine screening

TUBERCULIN, TINE TEST
(Rosenthal) Lederle

Swab • Uncap • Press • Discard

Comparable in accuracy and reliability to older standard intradermal tests*, but faster and easier to use. Since TINE TEST is relatively painless it should receive greater patient acceptance. Results are read at 48-72 hours. The self-contained, completely disposable unit requires no refrigeration and is stable for two years.
Side effects are possible but rare: vesiculation, ulceration or necrosis at test site. Contraindications, none; but use with caution in active tuberculosis. Available in boxes of 5 (new individually-capped unit); cartons of 25.
*Rosenthal, S. R., Nikurs, L., Yordy, E., and Williams, W.: Scientific Exhibit Presented at the Annual Meeting of the National Tuberculosis Association, Chicago, Illinois, May 30-June 2, 1965.

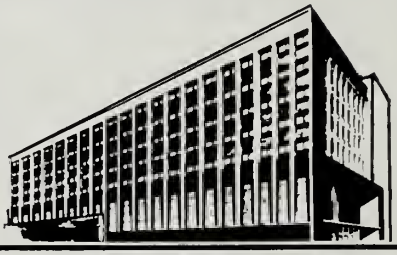
LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York
605-6-3390
Lederle

"It's a pleasure to save at the Half-Billion-Dollar Perpetual!"

"Size isn't everything . . . but it *is* nice to stand in the beautiful, spacious lobby of the big Perpetual and know I'm a shareholder! You see I've made it a habit to save *regularly* and the most practical time is on pay day . . . I just walk right over to Perpetual on my lunch hour. Perhaps you would find it more convenient to make your "savings date" on the first of the month . . . but surely by the 20th in order to receive a dividend for the full month. My savings—and yours—are *safe* at Perpetual. And your money earns steady, consistent dividends, credited quarterly."

PERPETUAL
BUILDING ASSOCIATION
Edward C. Baltz, President

ASSETS OVER $500,000,000 • ESTABLISHED 1881



DOWNTOWN............*11th & E Streets, Northwest*
ANACOSTIA....................*1340 Good Hope Road*
BETHESDA-CHEVY CHASE.. *7401 Wisconsin Avenue*
MIDTOWN...............*888 17th Street, Northwest*
DISTRICT HEIGHTS.............*7118 Marlboro Pike*
SILVER SPRING............... *8700 Georgia Avenue*
PRINCE GEORGES *East-West Hgwy. at Belcrest Road*

FEDERAL SAVINGS AND LOAN INSURANCE CORPORATION SAFETY OF YOUR SAVINGS INSURED UP TO $10,000

FEDERAL HOME LOAN BANK SYSTEM MEMBER

INDEX OF ADVERTISERS

These Advertisers Support Your Journal.
Please Give Them Your Support.

Page

Bank

Riggs National Bank 4

Beverages

Coca-Cola Company 28

Building & Loan Associations

National Permanent Savings & Loan Association T-230
Perpetual Building Association 54

Business Counseling

Professional Business Management 47

Collection Agencies

Capital Credit Corporation 48
Credit Bureau 5

Diagnostic Equipment

Sanborn Division of Hewlett-Packard T-218

Dietetic Foods

Sealtest Foods 47

Equipment & Supplies

Accredited Surgical Sales 50
Beuchler's, Inc. 47
Gibson Company 47
Jobst Institute, Inc. 40
Nelson Kloman Surgical Supply Company 32

Funeral Home

S. H. Hines & Company 56

Insurance

Mutual of Omaha 3-C
Russell, Marsh & Kennedy, Inc. 6

Investment Planning

Ferris & Company T-226

Nurse Registries

Association of Undergraduate and Practical Nurses Registry T-236
Capital Nurse Registry 49
U. S. Employment Service for D. C. 49

Page

Nutrition Education

National Dairy Council 25

Office Space

Gruver & Cooley 32
Pomponio Properties, Inc. 32
Shannon & Luchs T-220

Pharmaceuticals

Ames Company T-224
Armour Pharmaceutical Company 51–52
Bristol Laboratories 14–15
Burroughs Wellcome & Company 22
Burton, Parsons and Company 9
Glenbrook Laboratories 27
Hynson, Westcott & Dunning, Inc. 3
Lakeside Laboratories, Inc. T-227, 229, 231, 233, 235; 35, 37, 39
Lederle Laboratories 8, 17, 30–31, 53
Eli Lilly & Company 34
Merck, Sharp & Dohme, Division of Merck & Co., Inc. 29
Parke Davis & Company 2-C
Pfizer Laboratories 10–12
Philips Roxane Laboratories 45–46
Wm. P. Poythress & Company 13
A. H. Robins Company 19–21
Roche Laboratories 4-C
G. D. Searle & Company T-212–213
Smith, Kline & French Laboratories 41
E. R. Squibb & Sons 43
Walker Laboratories 42
Wallace Laboratories 24, 33
Winthrop Laboratories 7

Pharmacies

Higger's Drugs 47
Maxwell & Tennyson 47
Peoples Drug Stores 16

Sanitariums

Kalorama Convalescent Home 50
Kensington Gardens Sanitarium 18
Magnolia Gardens Nursing Home 44
Westbrook Psychiatric Hospital 44

T–text

ESTABLISHED 1873 WOMEN ASSISTANTS

In Washington and Suburbs

CALL COLUMBIA 5-7023
(*Six Trunk Lines*)

The S. H. Hines Company

Funeral Home

2901-03-05-07 FOURTEENTH STREET N.W
Northeast corner Harvard and 14th Streets

W. R. FRANK HINES
President and General Manager

MODERN AIR-CONDITIONED ROOMS WITH CHAPEL, PIPE ORGAN AND REPOSING ROOMS ARRANGED TO MEET EVERY REQUIREMENT AT NO ADDITIONAL CHARGE. CREMATIONS.

No forfeiture of VETERAN'S BURIAL ALLOWANCE

THE EXPENSE IS A MATTER OF YOUR OWN DESIRE

No Branch Establishments
Convenient parking facilities adjoining Funeral Home

ATTENTION!

All members of the Medical Society of the District of Columbia who are *now insured* under the official income protection insurance program!

The Administrator of your plan, in keeping with the principle of providing the best coverage available to members of the medical profession, is pleased to announce that increased benefits are now available to eligible members*:

- **Increased weekly benefits**
- **Longer term of coverage for sickness**

You will be contacted shortly to provide you with details of these improved benefits and to advise you how they can be used to modernize your plan of income protection insurance.

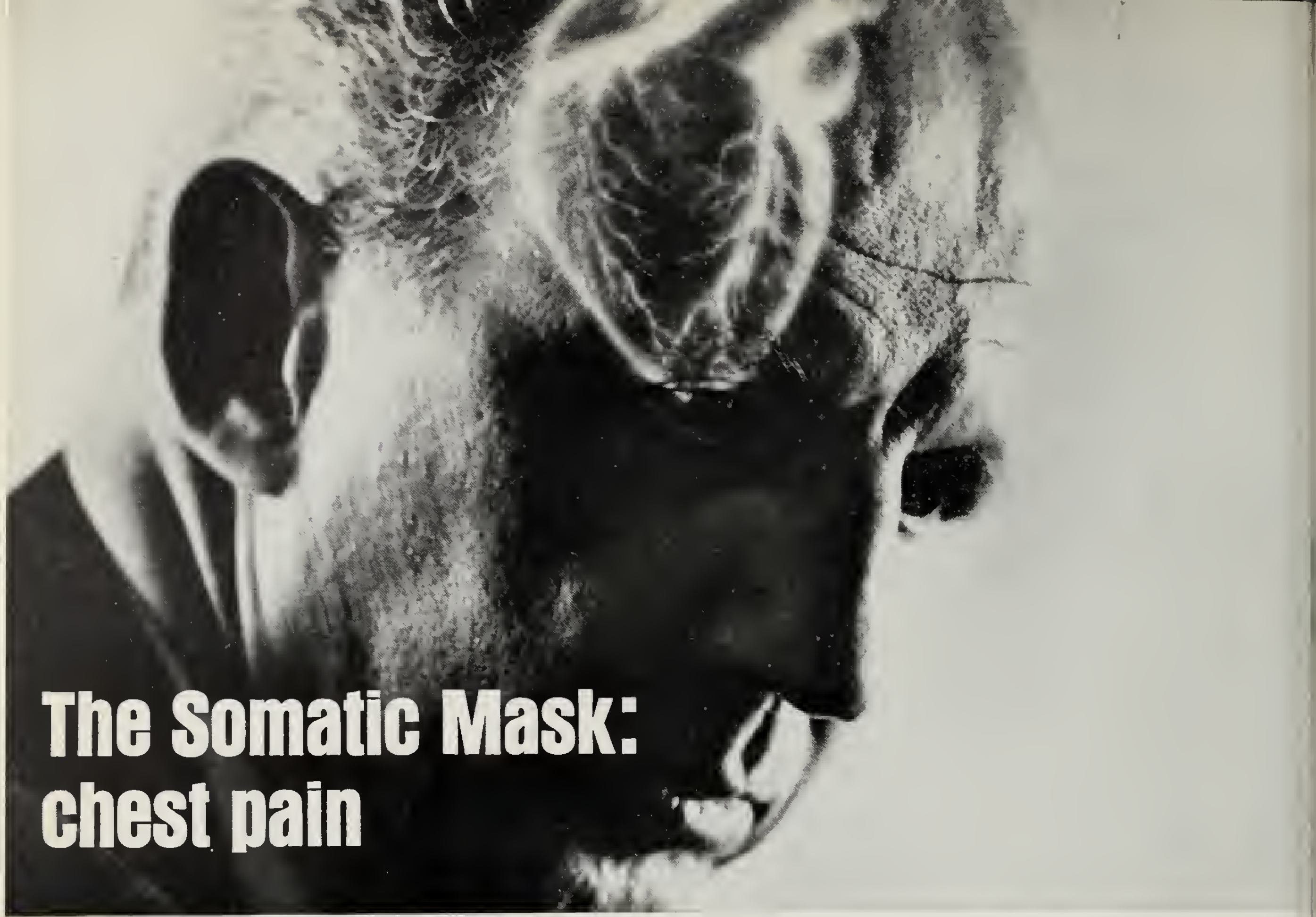
---

* This is an announcement only and does not contain any of the underwriting requirements for eligibility.

Joseph E. Jones, Administrator
1666 Connecticut Avenue, N.W.
Washington, D. C. 20009
Tel. 483-3100

Mutual
OF OMAHA
MAXIMUM BENEFITS
MINIMUM COST

MUTUAL OF OMAHA INSURANCE COMPANY
Life Insurance Affiliate: United of Omaha
Home Office: Omaha, Nebraska



heart disease
or psychic tension?

"Heart symptoms"—chest pain, tachycardia, arrhythmia—invariably alarm and preoccupy the patient, though they may be completely without organic basis. Such symptoms often are somatic masks of psychic tension, arising from constant encounters with stressful situations.

When the problem is diagnosed as emotionally produced, consider Valium (diazepam) as adjunctive therapy. Valium (diazepam) acts rapidly to calm the patient, to reduce his psychic tension and relieve associated cardiovascular complaints.

Neurotic fatigue—the chronic tiredness resulting from emotional strain which so often accompanies psychogenic "heart" symptoms—also can be controlled by this highly useful agent. Valium (diazepam) often achieves results where other psychotherapeutic agents have failed.

Valium (diazepam) is generally well tolerated, and usually does not impair mental acuity or ability to function. If side effects such as ataxia and drowsiness occur, they usually disappear with dosage adjustment.

Valium®(diazepam)

2-mg, 5-mg, 10-mg tablets

In prescribing: Dosage —Adults: Mild to moderate psychoneurotic reactions, 2 to 5 mg b.i.d. or t.i.d.; severe psychoneurotic reactions, 5 to 10 mg t.i.d. or q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hrs, then 5 mg t.i.d. or q.i.d. as needed; muscle spasm with cerebral palsy or athetosis, 2 to 10 mg t.i.d. or q.i.d. Geriatric patients: 1 or 2 mg/day initially, increase gradually as needed.

Contraindications: Infants, patients with history of convulsive disorders or glaucoma.

Warning: Not of value in the treatment of psychotic patients, and should not be employed in lieu of appropriate treatment.

Precautions: Limit dosage to smallest effective amount in elderly patients (not more than 1 mg, one or two times daily) to preclude ataxia or oversedation. Advise patients against possibly hazardous procedures until correct maintenance dosage is established; driving during therapy not recommended. In general, concurrent use with other psychotropic agents is not recommended. Warn patients of possible combined effects with alcohol. Safe use in pregnancy not established. Observe usual precautions in impaired renal or hepatic function and in patients who may be suicidal; periodic blood counts and liver function tests advisable in long-term use. Cease therapy gradually.

Side Effects: Side effects (usually dose-related) are fatigue, drowsiness and ataxia. Also reported: mild nausea, dizziness, blurred vision, diplopia, headache, incontinence, slurred speech, tremor and skin rash; paradoxical reactions (excitement, depression, stimulation, sleep disturbances and hallucinations) and changes in EEG patterns. Abrupt cessation after prolonged overdosage may produce withdrawal symptoms similar to those seen with barbiturates, meprobamate and chlordiazepoxide HCl.

Supplied: Tablets, 2 mg, 5 mg and 10 mg; bottles of 50 for convenience and economy in prescribing.

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

ROCHE

OPY 1

MEDICAL ANNALS of the DISTRICT OF COLUMBIA

SPLAY
IELVES

May, 1966 Vol. XXXV · No. 5

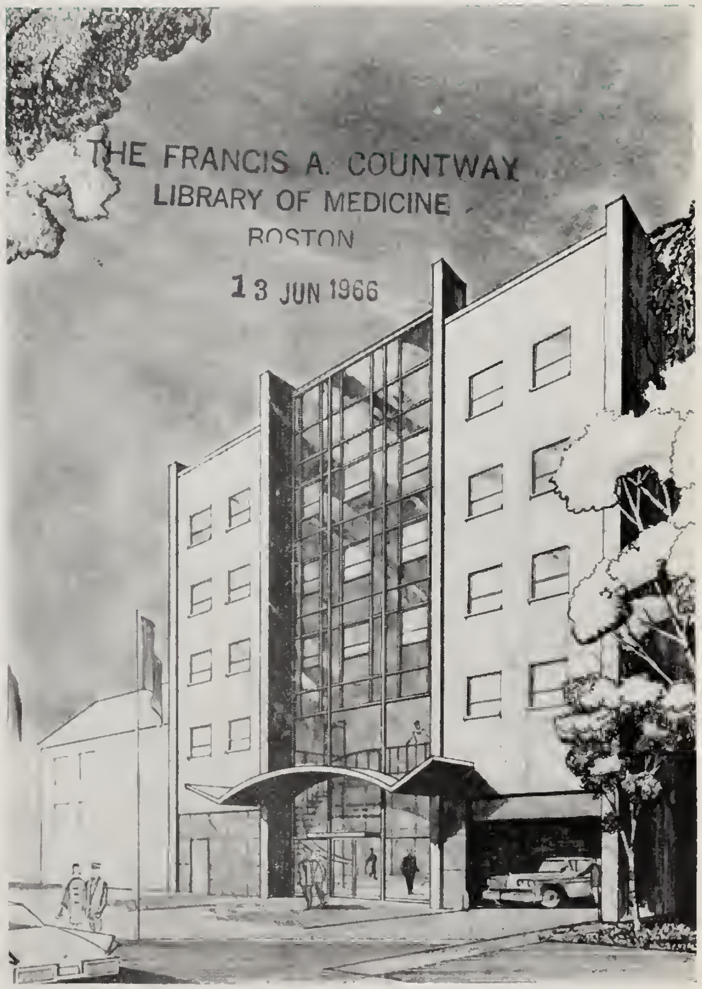
NEW MEDICAL SOCIETY
HEADQUARTERS

Ground-breaking
March 16, 1965

Occupancy
January 3, 1966

Cornerstone-laying, Dedication and Open House
March 13, 1966

(Story and pictures, pages 264–274)



THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
13 JUN 1966

THE MEDICAL SOCIETY OF
THE DISTRICT OF COLUMBIA
2007 Eye Street Northwest

INDICATIONS: Grand mal epilepsy and certain other convulsive states. **PRECAUTIONS:** Periodic examination of the blood is advisable. Nystagmus in combination with diplopia and ataxia indicates dosage should be reduced. **SIDE EFFECTS:** Allergic phenomena such as polyarthropathy, fever, skin eruptions, and acute generalized morbilliform eruptions with or without fever. Upon discontinuation of therapy eruptions usually subside. Rarely, dermatitis goes on to exfoliation with hepatitis, and further dosage is contraindicated. Though mild and rarely an indication for stopping dosage, gingival hypertrophy, hirsutism, and excessive motor activity are occasionally encountered, especially in children, adolescents, and young adults. During initial treatment, minor side effects may include gastric distress, nausea, weight loss, transient nervousness, sleeplessness, and a feeling of unsteadiness. All usually subside with continued use. Hematologic disorders, including megaloblastic anemia, leukopenia, granulocytopenia, pancytopenia, and aplastic anemia have been reported. Nystagmus may develop. DILANTIN is supplied in several forms including Kapseals containing 0.1 Gm. and 0.03 Gm. diphenylhydantoin sodium.

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit, Michigan 48232

The color combinations of the banded capsules are Parke-Davis trademarks.

75965

the epileptic...talent in eclipse or fulfillment of potential?

the difference is often

Kapseals®

Dilantin®

(diphenylhydantoin sodium)

PARKE-DAVIS

Lutrexin®

HW&D BRAND OF LUTUTRIN

3000 UNIT TABLETS

IN THE TREATMENT OF FUNCTIONAL DYSMENORRHEA AND SELECTED CASES OF PREMATURE LABOR AND 2ND AND 3RD TRIMESTER THREATENED ABORTION

In controlling abnormal uterine activity, LUTREXIN, the non-steroid "uterine relaxing factor" has been found to be the drug of choice by many clinicians.

No side effects have been reported, even when massive doses (25 tablets per day) were administered.

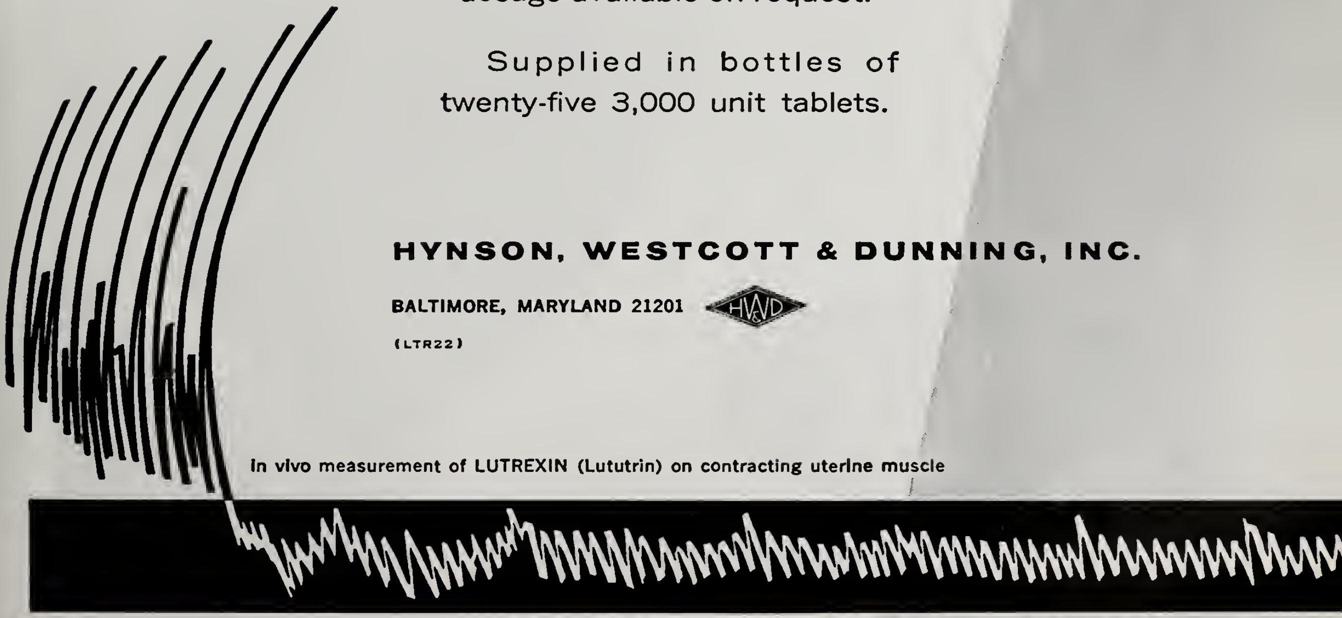
Literature on indications and dosage available on request.

Supplied in bottles of twenty-five 3,000 unit tablets.

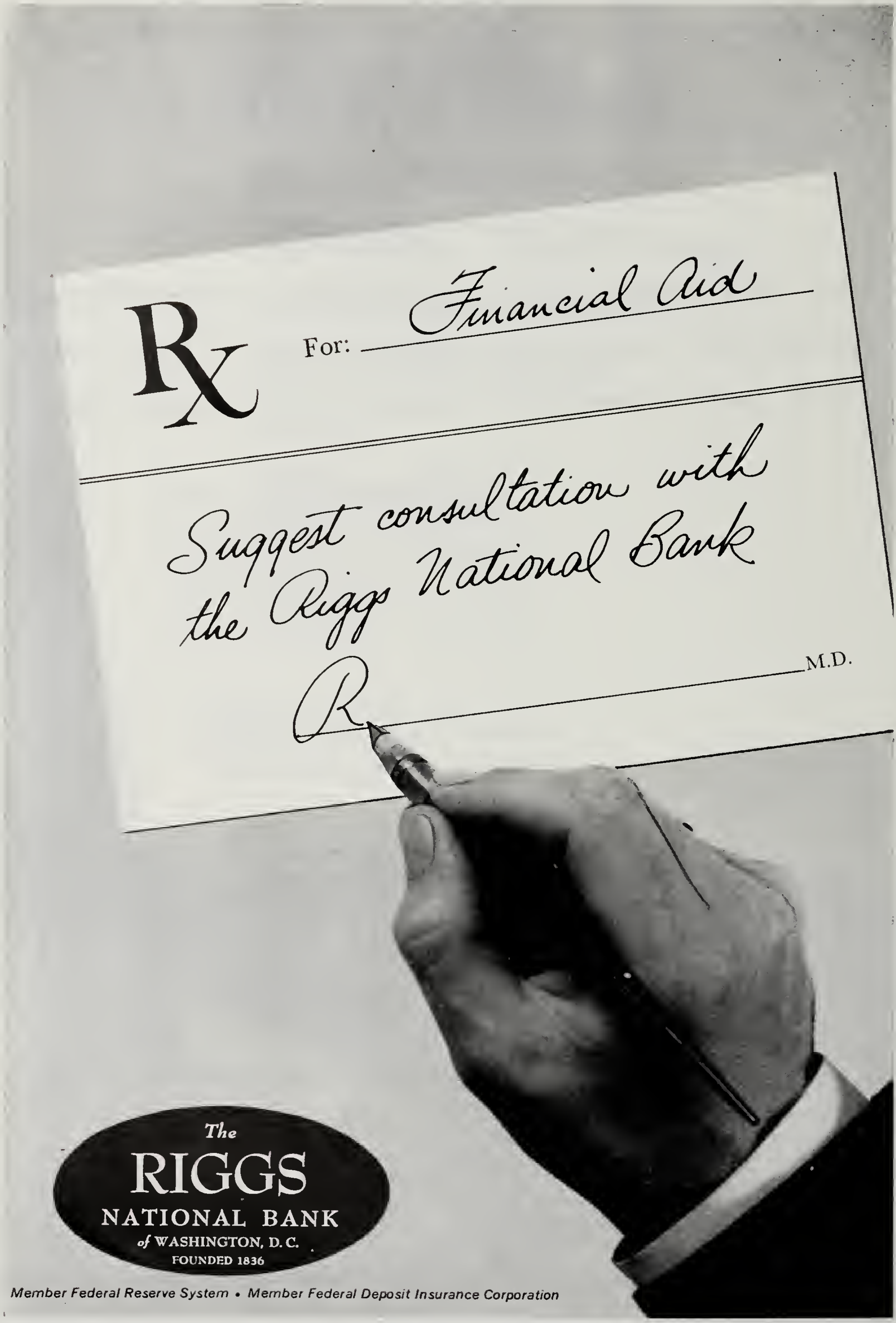
HYNSON, WESTCOTT & DUNNING, INC.

BALTIMORE, MARYLAND 21201

(LTR22)



In vivo measurement of LUTREXIN (Lututrin) on contracting uterine muscle


℞
For: Financial Aid
Suggest consultation with the Riggs National Bank
R
M.D.

The
RIGGS
NATIONAL BANK
of WASHINGTON, D. C.
FOUNDED 1836

Member Federal Reserve System • Member Federal Deposit Insurance Corporation

MEDICAL ANNALS

of the District of Columbia

EDITORIAL OFFICE:
2007 Eye Street, N.W., Washington, D.C. 20006
Telephone 223-2230

COPYRIGHT ©, 1966
BY THE MEDICAL SOCIETY
OF THE DISTRICT OF COLUMBIA

Yearly Subscription, $5.00
Single Number, 50¢

Second-class postage paid at Baltimore, Md.
Published monthly at
Mount Royal and Guilford Avenues,
Baltimore, Maryland 21202

Contents for May

SCIENTIFIC ARTICLES

Electromyographic Evidence of DDT-induced Myasthenia. *Eloise W. Kailin, M.D.*, Silver Spring, Md., *and Alicia Hastings, M.D.*, Washington 237

Office Diagnosis of Respiratory-tract Bacterial Infections. *Captain A. M. Margileth, MC, USN, and Lt. Comdr. G. W. Mella, MC, USN*, Bethesda, Md. 245

Clinical Experience with Streak-plate Urine Cultures. *Lt. Comdr. G. W. Mella, MC, USN, and Captain A. M. Margileth, MC, USN*, Bethesda, Md. 250

The Oral Contraceptives and Infertility. *Herbert L. Kotz, M.D., F.A.C.O.G., and Oscar I. Dodek, Jr., M.D.*, Washington 255

The Effect of Moderate Total Body Hypothermia on Experimental Irreversible Renal Failure. *Erwin Hirsch, M.D., Ira Brecher, M.D., and Ira N. Tublin, M.D.*, Washington 259

EDITORIAL

A New Home for a New Age 265

(*Continued on page 6*)

ONLY ONE FIRM CAN PROVIDE ALL THESE SERVICES, OR ANY ONE OF THEM...

- A complete low-cost patient billing service
- Confidential information on every account
- An ethical and effective collection service
- A dignified pre-collection service
- Professional accounts receivable consultation

THE CREDIT BUREAU, INC.

FOUR OFFICES TO SERVE YOU LOCALLY

WASHINGTON, D.C.; ROCKVILLE, MD.; FAIRFAX, VA.; ALEXANDRIA, VA.

3,000 CLOSELY ASSOCIATED AGENCIES THROUGHOUT THE COUNTRY

Call Now to Arrange an Appointment with Our Representative

ASSOCIATED CREDIT BUREAUS OF AMERICA, INC.
MEDICAL CREDITS DIVISION

ED GARRETSON NAtional 8-0680

Contents for May

(Continued)

SPECIAL ARTICLE

Medicine's Responsibility Today. *James Z. Appel, M.D., F.A.C.S.*, Lancaster, Pa. 272

MISCELLANY

New College of Allied Health Professions 258
President's Page: A Proposed Metropolitan Washington Regional Center 261
Laying of the Cornerstone: Remarks of President Robert J. Coffey 266
Contents of Cornerstone 267
Dedication Ceremonies 267
Many Hands, Many Thanks. *Frank S. Pellegrini, M.D.*, Washington 269
Donors of Furnishings at MSDC Headquarters 270
Blue Cross 65 and Blue Shield 65 275
"Good Samaritan" Law for D. C. 277
Health Dept. Notes: The Urban Environment and Health. *Murray Grant, M.D., D.P.H.*, Washington 278
Free Red Cross Courses in Home Care. *Ruth R. Woods, R.N.*, Washington 283
Patients with Wiskott-Aldrich Syndrome Needed for Clinical Center Study 283
News and Personals 285
Obituaries 294
Medical Annals Staff and Officers of Medical Society *Adv. 9*
National and Regional Meetings *Adv. 19*
Book Reviews *Adv. 46*
Classified Advertisements *Adv. 54*
Index of Advertisers *Adv. 57*

INSURANCE FOR THE DOCTOR

***PROFESSIONAL LIABILITY**
OFFICE PUBLIC LIABILITY
LOW COST TERM LIFE INSURANCE

and

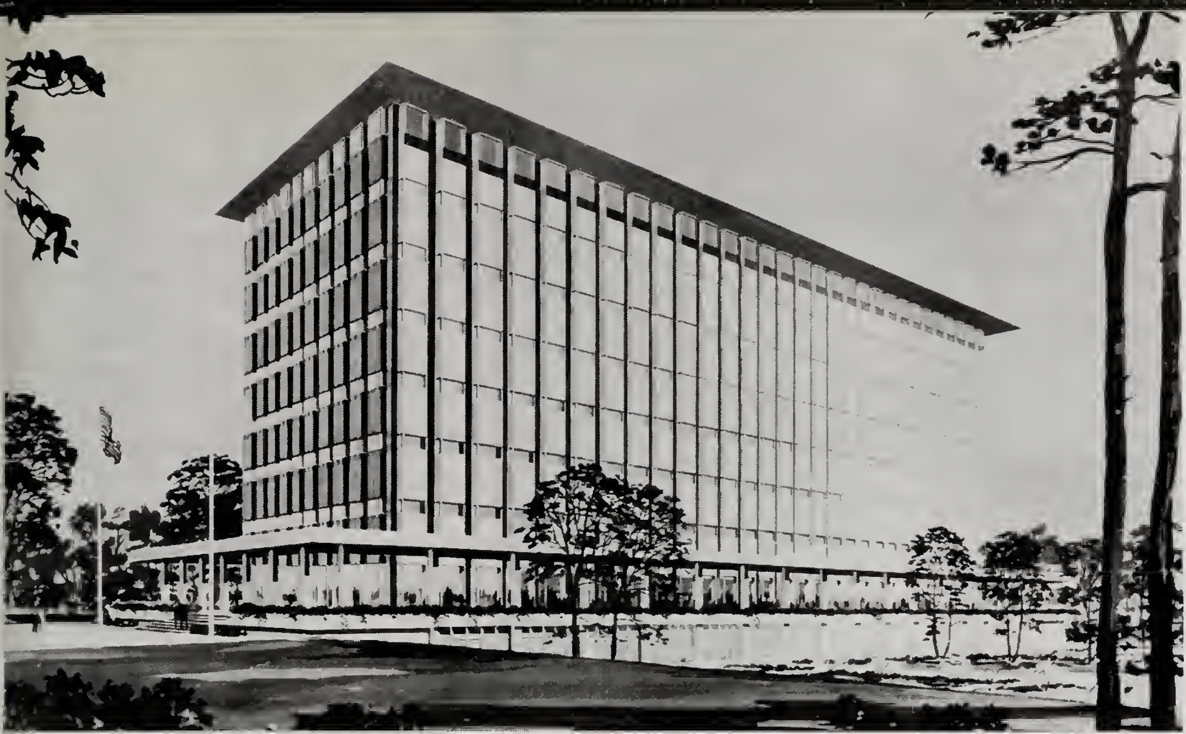
EMPLOYEES WORKMEN'S COMPENSATION
EQUIPMENT FLOATER
FIRE INSURANCE CONTENTS
BUSINESS EXPENSE DISABILITY
BONDS ON EMPLOYEES
AUTOMOBILE INSURANCE
ANNUITIES—FIXED & VARIABLE
NON-CAN DISABILITY INCOME
PENSION PLANS FOR DOCTORS
PENSION PLANS FOR EMPLOYEES
$1,000,000 CATASTROPHE LIABILITY

*endorsed by the Medical Society of the District of Columbia

Russell, Marsh & Kennedy, Inc.

WILLIAM G. RUSSELL
President

5151 Wisconsin Ave., N.W.
Telephone: 244-7600



The Professional Building of Prince George's Center

is now leasing . . . An unusual opportunity to establish professional offices in the next important office building to be erected in the satellite city project described by the Maryland-National Park and Planning Commission as *"a planned residential, commercial, employment, and social complex which, as yet, has no equal in the Baltimore-Washington area."*

THE PROFESSIONAL BUILDING is designed by Edward Durell Stone, the master planner and architect for all of PRINCE GEORGE'S CENTER. It will be a twin of Mr. Stone's award-winning FEDERAL BUILDING, adjacent to the Prince George's Plaza Shopping Center on East-West Highway. THE PROFESSIONAL BUILDING and THE FEDERAL BUILDING will be separated by a Mall, an outdoor ice skating rink, and a 1,250-seat cinema.

THE PROFESSIONAL BUILDING of PRINCE GEORGE'S CENTER was designed with the unique requirements of the professional man in mind. A few of these features include:

- Enclosed auto arrival entrances and exits with abundant indoor and outdoor parking for patients or clients as well as staff.
- A private Health Club with squash, handball, swimming, sauna and lounge.
- Four high-speed elevators and a freight lift.
- A special corridor design which permits maximum use and flexibility in suite planning.
- Served by public transportation and situated on main arterial highways.

For information, call or write: FEDERAL BUILDING
Prince George's Center, Prince George's Plaza, Md.
phone: 779-4800. Ask for Mr. Coll

Anatomy of
Low Back Pain #1
the sedentary life
is often the seat of
low back pain

The human spine is not engineered for prolonged sitting at desks, pianos, typewriters and drafting boards. The stresses set up by the heavy, forward-tilted head and trunk, balanced precariously on an insufficient base, result in strain of the dorsal musculature, particularly at the low lumbar level.

The unusual muscle-relaxant and analgesic properties of 'Soma' make it especially useful in the treatment of low back sprains and strains. 'Soma' is widely prescribed ☐ **to relieve pain** ☐ **to relax muscles** ☐ **to restore mobility.**

Indications: 'Soma' is useful for management of muscle spasm, pain, and stiffness in a variety of inflammatory, traumatic, and degenerative musculoskeletal conditions. It also may act to normalize motor activity in certain neurologic disturbances.

Contraindications: Allergic or idiosyncratic reactions to carisoprodol.

Precautions: 'Soma', like other central nervous system depressants, should be used with caution in patients with known propensity for taking excessive quantities of drugs and in patients with known sensitivity to compounds of similar chemical structure, e.g., meprobamate.

Side Effects: The only side effect reported with any frequency is sleepiness, usually on higher than recommended doses. An occasional patient may not tolerate carisoprodol because of an individual reaction, such as a sensation of weakness. Other rarely observed reactions have included dizziness, ataxia, tremor, agitation, irritability, headache, increase in eosinophil count, flushing of face, and gastrointestinal symptoms.

One instance each of pancytopenia and leukopenia, occurring when carisoprodol was administered with other drugs, has been reported, as has an instance of fixed drug eruption with carisoprodol and subsequent cross reaction to meprobamate. Rare allergic reactions, usually mild, have included one case each of anaphylactoid reaction with mild shock and angioneurotic edema with respiratory difficulty, both reversed with appropriate therapy. In cases of allergic or hypersensitivity reactions, carisoprodol should be discontinued and appropriate therapy initiated. Suicidal attempts may produce coma and/or mild shock and respiratory depression.

Dosage: Usual adult dose is one 350 mg. tablet three times daily and at bedtime.

Supplied: Two Strengths: 350 mg. white tablets and 250 mg. orange, two-piece capsules.

Before prescribing, consult package circular.

for the relief of low back sprains and strains

SOMA®

(CARISOPRODOL)

Wallace Laboratories, Cranbury, N.J.
26S01J

VOLUME 35 • MAY 1966

EDITOR

Wallace M. Yater, M.D.

MANAGING EDITOR

George W. Cooley

ASSISTANT EDITOR

A. Louise Eckburg

EDITORIAL BOARD

Brian Blades, M.D.
Frederic G. Burke, M.D.
I. Phillips Frohman, M.D.
Naomi M. Kanof, M.D.
Zigmond M. Lebensohn, M.D.
Thomas M. Peery, M.D.
Herbert P. Ramsey, M.D.
George E. Schreiner, M.D.
Donald Stubbs, M.D.

CONSULTING EDITORS

Brig. Gen. Joe M. Blumberg, MC, USA, Director, Armed Forces Institute of Pathology
Irving B. Brick, M.D., Professor of Medicine, Georgetown University School of Medicine
W. Montague Cobb, M.D., Professor of Anatomy, Howard University College of Medicine
Vernon Knight, M.D., Clinical Director, National Institute of Allergy and Infectious Diseases
Walter Kurland, M.D., Chief, Outpatient Service, Veterans Administration Hospital
Colonel Loren F. Parmley, MC, USA, Chief, Department of Medicine, Walter Reed General Hospital
Alvin E. Parrish, M.D., Associate Professor of Medicine, George Washington University School of Medicine
Captain Rufus J. Pearson, Jr., MC, USN, Director of Professional Services, U.S. Naval Hospital

THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

OFFICERS

Robert J. Caffey, M.D., President*
Henry D. Ecker, M.D., President-elect*
Lawrence A. Rapee, M.D., First Vice President*
Claudine M. Gay, M.D., Second Vice President*
Mr. George W. Cooley, Secretary-Treasurer*

EXECUTIVE BOARD

J. Spencer Dryden, M.D., Chairman (1966)
Karl C. Corley, M.D. (1967)
Edward W. Nicklas, M.D. (1968)
Paul R. Wilner, M.D. (1969)

DELEGATES TO AMA

Raymond T. Holden, M.D.*
C. Willard Camalier, Jr., M.D.*

LEGAL COUNSEL

Mr. Warren E. Magee

---

* Ex officio member of the Executive Board

MEDICAL
ANNALS
of the
DISTRICT OF
COLUMBIA

2007 Eye Street, N.W. Washington, D.C. 20006

The MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA is published monthly by the Medical Society of the District of Columbia for the promulgation of information of scientific, general medical and personal interest. All articles and correspondence should be sent to DR. WALLACE M. YATER, EDITOR, MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA, 2007 Eye Street, N.W., Washington, D. C. 20006.

EXCLUSIVE PUBLICATION: Articles are accepted for publication on condition that they are contributed solely to this journal.

MANUSCRIPTS: Manuscripts must be typewritten, double-spaced, and the original copy submitted.

ILLUSTRATIONS: Photographs and drawings for illustrations must be carefully marked and show clearly what is intended. MEDICAL ANNALS will bear the cost of engravings for 2 illustrations accompanying manuscripts submitted for publication. The cost of more than 2 engravings must be borne by the author.

REFERENCES: References should include the name of author (last name and initials), exact title of article, name of periodical, with volume, page (day of month in weekly), and year. References should be numbered consecutively in the order in which they appear in the text.

COPYRIGHT: Matter appearing in the ANNALS is covered by copyright but, as a rule, no objection will be made to its reproduction in reputable medical journals, if proper credit is given. However, the reproduction for commercial purposes of articles appearing in the MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA must have the approval of the Editor.

REPRINTS: Reprints may be obtained at cost.

ADVERTISING: Pharmaceutical advertising must be approved by the State Medical Journal Advertising Bureau, Inc. Other advertising copy may be accepted subject to the approval of the Editor. All copy or plates must reach the ANNALS office by the first of the month preceding publication. Display and classified advertising rates will be furnished on request.

SUBSCRIPTIONS: Subscription is included in the annual dues of members. To non-members the annual subscription price is: domestic, \$5.00; Canadian, \$5.50; foreign, \$6.00, including postage; single copies, 50 cents.

Checks, etc. should be made payable to the Medical Society of the District of Columbia.

;utazolidin® alka

ɜnylbutazone	100 mg.
ɜd aluminum	
ɟroxide gel	100 mg.
gnesium trisilicate	150 mg.
natropine	
thylbromide	1.25 mg.

In rheumatoid arthritis–effective therap with minimal chance of G-I upset

erapeutic Effects
ty to 75% of patients obtain major relief of hritic symptoms, as reported by numer- s clinicians. In addition, the problem of stric upset—a major problem with certain her oral antiarthritic agents—is minimized the presence of antacids and an antispas- dic in the formulation.

provement is generally seen within 3 to 4 ys, and trial therapy need not be con- ued beyond a week. Relief of pain is lowed quickly by resolution of inflamma- n and improved joint function. Relief of mptoms is often accompanied by in- ased appetite, gain in weight and an proved sense of well-being.

e initial response is usually maintained hout dosage increases; indeed, initial sage is often reduced for maintenance rposes.

licylate or steroid therapy can usually be ninished or, in some instances, eliminated.

ntraindications
ema; danger of cardiac decompensation; story or symptoms of peptic ulcer; renal, patic or cardiac damage; history of drug ergy; history of blood dyscrasia. Because the increased possibility of toxic reac- ns, the drug should not be given when the tient is senile or when other potent emotherapeutic agents are given concurrently. Large doses of Butazolidin alka are contraindicated in patients with glaucoma.

Precautions
Before prescribing, the physician should obtain a detailed history and perform a complete physical and laboratory examination, including a blood count. The patient should be kept under close supervision and should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools. Regular blood counts should be made. The drug should be used with greater care in the elderly.

Warning
If coumarin-type anticoagulants are given simultaneously, the physician should watch for excessive increase in prothrombin time.

Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea and sulfonamide-type agents and insulin. Patients receiving such concomitant therapy should be carefully observed for this effect.

Adverse Reactions
The most common adverse reactions are nausea, edema and drug rash. The drug may reactivate a latent peptic ulcer. Infrequently, agranulocytosis, generalized allergic reaction, stomatitis, salivary gland enlargement, vertigo and languor may occur. Leukemia and leukemoid reactio have been reported but cannot definitel attributed to the drug. Thrombocytopen purpura and aplastic anemia are also pc sible side effects. Confusional states, agitation, headache, blurred vision, opti neuritis and transient hearing loss have been reported, as have hepatitis, jaundi and several cases of anuria and hematu With long-term use, reversible thyroid hyperplasia may occur infrequently.

Average Dosage in Rheumatoid Arthriti
Initial: 3 to 6 capsules daily in divided dc It is usually unnecessary to exceed 4 car sules daily. A trial period of 1 week is adı quate to determine response; in the abse of favorable response, discontinue.

Maintenance: An effective level is often achieved with 1 to 2 capsules daily; do n exceed 4 daily.

Also available:
Butazolidin®, phenylbutazone
Tablets of 100 mg.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York

Geigy

BU-3805P

"Everything
I eat
turns to
FAT!"

**For the
patient who
must lose
more than 15,
25 or even
50 pounds**

POSTAGE
WILL BE PAID
BY
ADDRESSEE

NO
POSTAGE
NECESSARY IF
MAILED IN THE
UNITED STATES

BUSINESS REPLY CARD First Class Permit No. 4, Mystic, Connecticut

COOPER, TINSLEY LABORATORIES INC.
Mystic, Connecticut

For the patient who must lose more than 15, 25 or even 50 pounds...

the patient who must adhere to a long-term regimen — mere appetite suppressants are often not broad enough in scope. They suppress appetite and help achieve minor weight loss, but after several weeks the patient frequently becomes discouraged by a weight plateau. Many times other problems such as anxiety, constipation and hunger spasm complicate therapy.

Phantos Day-Long Action Capsules afford more complete obesity control because one capsule daily provides much more than mere appetite suppression. In addition to day-long appetite control, Phantos capsules supply a mild metabolic boost, alleviate hunger spasm, provide general mild laxation and promote sound sleep.

Unlike ordinary anorectics, the Phantos formula anticipates the problems which demoralize the dieting patient. The components are released at different times throughout the day, thus adhering to the changing pattern of the patient's need.

Each Phantos Day-Long Action Capsule supplies: for immediate release—amphetamine sulfate 5 mg., thyroid ½ gr., atropine sulfate 1/360 gr., aloin ¼ gr.; for intermediate release—amphetamine sulfate 5 mg., thyroid ½ gr., atropine sulfate 1/360 gr.; for final release—amphetamine sulfate 5 mg., thyroid ½ gr., phenobarbital* ¼ gr.
Also, Phantos-10: two-thirds above formula.

Dosage: One Phantos capsule daily, taken before breakfast.

Precautions: Contraindicated in cases of marked hypertension, coronary or cardiovascular disease, diabetes mellitus and thyroid disease. Use with caution in patients hypersensitive to barbiturates or sympathomimetic compounds (*Warning: May be habit-forming).

COOPER-TINSLEY

Unlike ordinary anorectics

Phantos® DAY-LON ACTION CAPSULE

anticipate the problems which demoralize the dieting patient

PH-5-SJ

COOPER, TINSLEY LABORATORIES INC.
Mystic, Connecticut

Gentlemen:
Please send me a sample supply of **Phantos®** *Day-Long Action Capsules*

_______________________________ M.D.
(Name)

____
(Street)

____
(City) (State) *(Zip)*

Just because Susie had the same symptoms, is it likely her neighbor needs the identical medication?

Don't listen!

Women talk about hats and husbands and houses That's fine but when your neighbor starts telling you about how her physician treated a particular illness that she had and suggests that you do the same don't listen When you're not feeling well, see your physician. Only he is qualified to diagnose your problem and prescribe treatment specifically for you Someone else's treatment might be dangerous for you (Remember that, just in case you're tempted to pass on advice or pills to a friend) And remember, too, when you have a prescription to be refilled that has already been refilled five times or is more than six months old your Peoples pharmacist MAY have to call your physician before refilling it again That's the law Since this all takes time, you can avoid delays by ordering refills before you actually run out In any case, you can be assured that Peoples will serve you efficiently courteously, and professionally

PEOPLES
PRESCRIPTION DRUG STORES

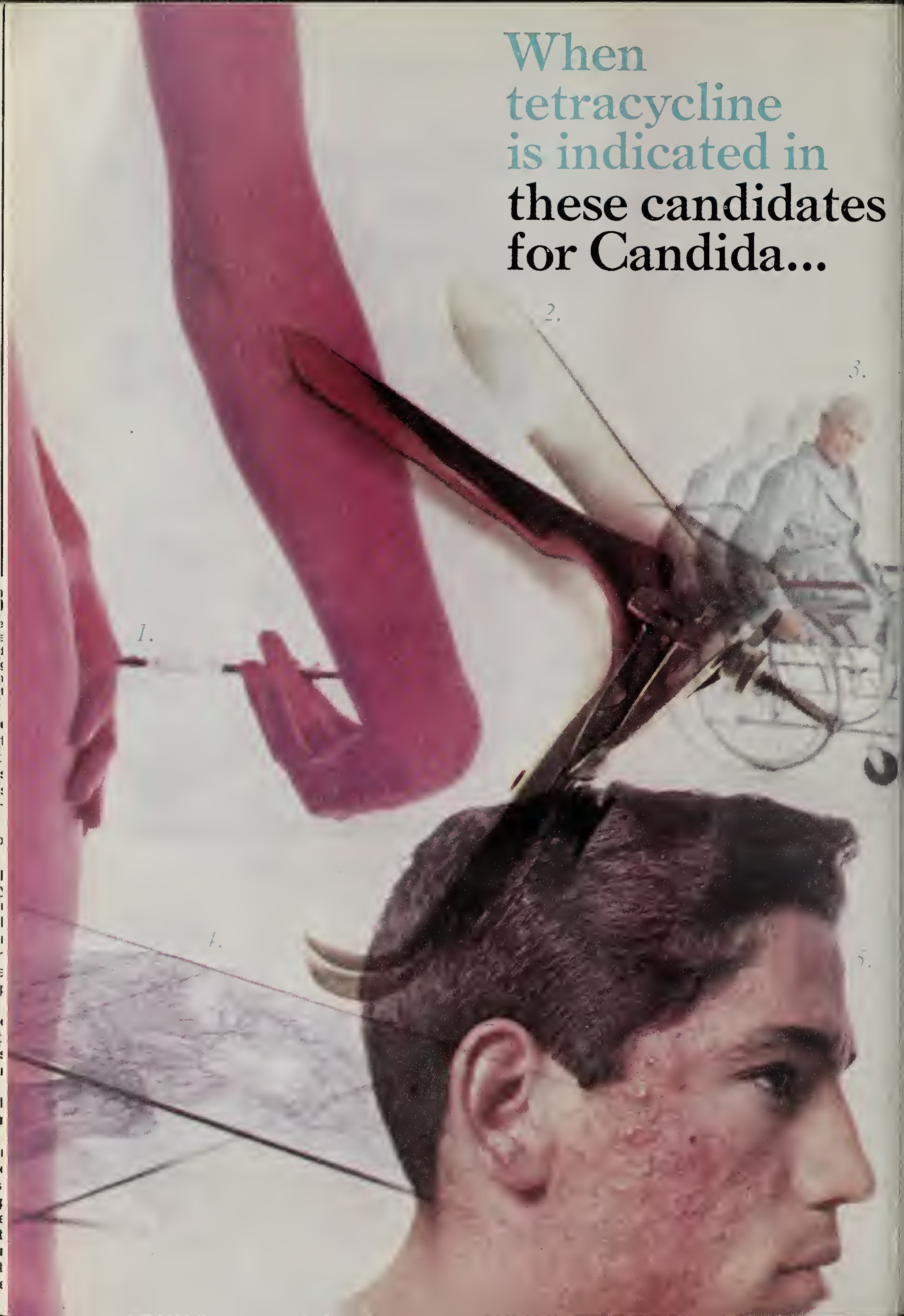
ALL PEOPLES DRUG STORES FILLED OVER 7 MILLION PRESCRIPTIONS IN 1965. A MEASURE OF THE TRUST PEOPLE HAVE IN PEOPLES.

Number 2 of a series published in Washington, D.C. newspapers

Peoples advises the public to trust *only* the advice of a physician. Next time you see a Peoples ad, take a minute of your busy day to read it. You might be pleasantly surprised to see that all advertisements don't shout "sale." *Peoples is professional.*

PEOPLES PRESCRIPTION DRUG STORES

ALL PEOPLES DRUG STORES FILLED OVER 7 MILLION PRESCRIPTIONS IN 1965 • A MEASURE OF THE TRUST PEOPLE HAVE IN PEOPLES


When tetracycline is indicated in these candidates for Candida...
1.
2.
3.
4.
5.

New
low-cost tetracycline/ antifungal therapy

Tetrex®-F

tetracycline
phosphate complex
–nystatin

Because new Tetrex-F (tetracycline phosphate complex-nystatin) is the most economical therapy of its kind that you can prescribe, it is a sound choice whenever tetracycline therapy is indicated in patients predisposed to monilial infections.

Who are these "candidates for Candida"?

1. diabetic patients
2. nonpregnant women with a history of recent or recurrent monilial vaginitis
3. elderly or debilitated patients
4. patients with a past history of moniliasis
5. patients on long-term tetracycline or corticosteroid therapy.

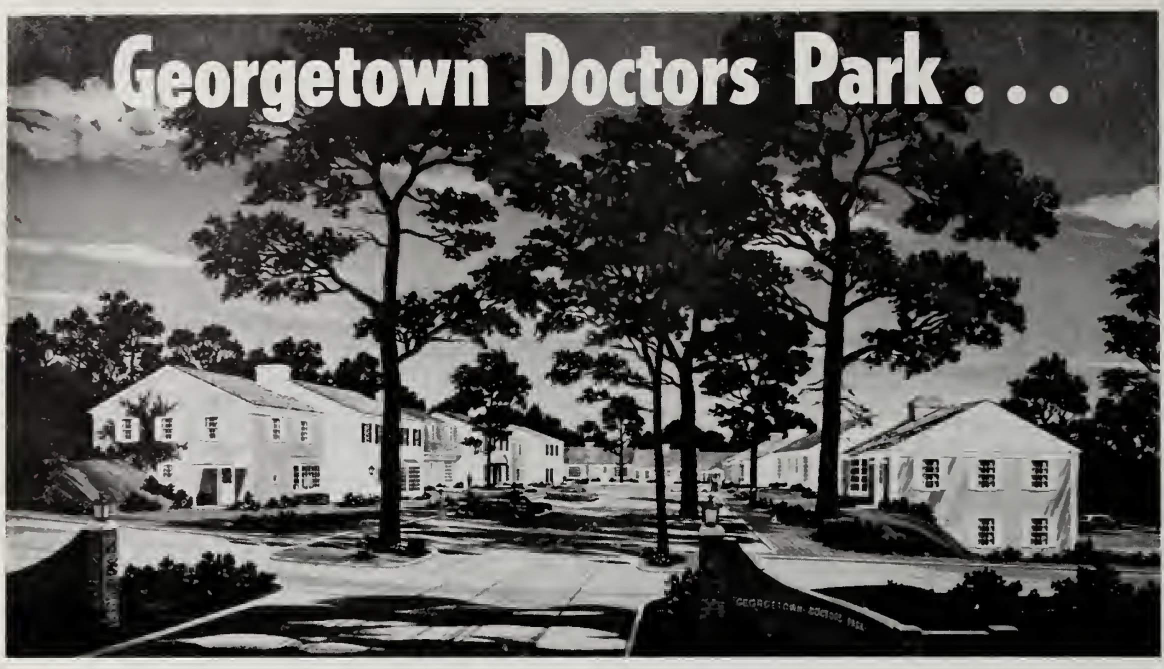
For these patients, Tetrex-F (tetracycline phosphate complex-nystatin) provides efficient tetracycline therapy against a broad range of infections *plus* protection against superinfection associated with the overgrowth of *C. albicans* in the G.I. tract.

Priced for savings

Tetrex-F (tetracycline phosphate complex-nystatin) is lowest in cost—priced 20% lower than most tetracycline/antifungal products.

BRISTOL THERAPEUTIC SUMMARY
For complete information consult Official Package Circular.
Indications: Infections of respiratory, gastrointestinal and genitourinary tracts and skin and soft tissues due to tetracycline-sensitive organisms, in patients with increased susceptibility to monilial infections.
Contraindications: The drug is contraindicated in patients hypersensitive to its components.
Warnings: Photodynamic reactions have been produced by tetracyclines. Natural and artificial sunlight should be avoided during therapy. Stop treatment if skin discomfort occurs. No cases of photosensitivity have been reported with Tetrex (tetracycline phosphate complex). With renal impairment, systemic accumulation and hepatotoxicity may occur. In this situation, lower doses should be used. Tooth staining and enamel hypoplasia may be induced during tooth development (last trimester of pregnancy, neonatal period and childhood).
Precautions: Bacterial superinfection may occur. Infants may develop increased intracranial pressure with bulging fontanels. In gonorrheal therapy, serologic tests for syphilis should be conducted initially and monthly for 3 months.
Adverse Reactions: Glossitis, stomatitis, nausea, diarrhea, flatulence, proctitis, vaginitis, dermatitis, and allergic reactions may occur.
Usual Adult Dosage: 1 capsule q.i.d. Continue therapy for 10 days in beta-hemolytic streptococcal infections. Administer one hour before or 2 hours after meals.
Supply: Capsules, bottles of 16. Each capsule contains tetracycline phosphate complex equivalent to 250 mg. tetracycline HCl activity and 250,000 units of nystatin. Oral Suspension, 60-ml. bottle. Each 5 ml. contains tetracycline equivalent to 125 mg. tetracycline hydrochloride and nystatin, 125,000 units.

BRISTOL
BRISTOL LABORATORIES
Division of Bristol-Myers Co.
Syracuse, New York



NEEDED

SURGEONS, PEDIATRICIANS, OPHTHALMOLOGISTS, AND OTOLARYNGOLOGISTS

Georgetown Doctors Park, the most unique medical facility in the Washington, D. C. area, is now staffed with General Practitioners, Internists, Urologists, Obstetricians and Gynecologists, Dentists, Oral Surgeons, Psychiatrists, Orthodontists, and Cardiologists. We expect a Radiologist, an Allergist, and a Dermatologist will move in soon, and we are talking with a Peridontist. We also have a beautiful and well-equipped Pharmacy and a complete Clinical Pathology Laboratory on the premises. NOW—we want to expand, adding the necessary specialists to make ours a community that will offer outstanding service to doctors and their patients.

In a beautiful, tree-studded setting, Georgetown Doctors Park is located in the heart of Bethesda, suburban Washington's medical research complex, directly across from the National Institutes of Health and less than ten minutes from several major hospitals. Suites are specially designed for each doctor or dentist and include sound-conditioning, individually controlled heating and air-conditioning, a private entrance to each suite, and parking at the doorstep for you and your patients. Distinguished in appearance and unmatched in location is Georgetown Doctors Park.

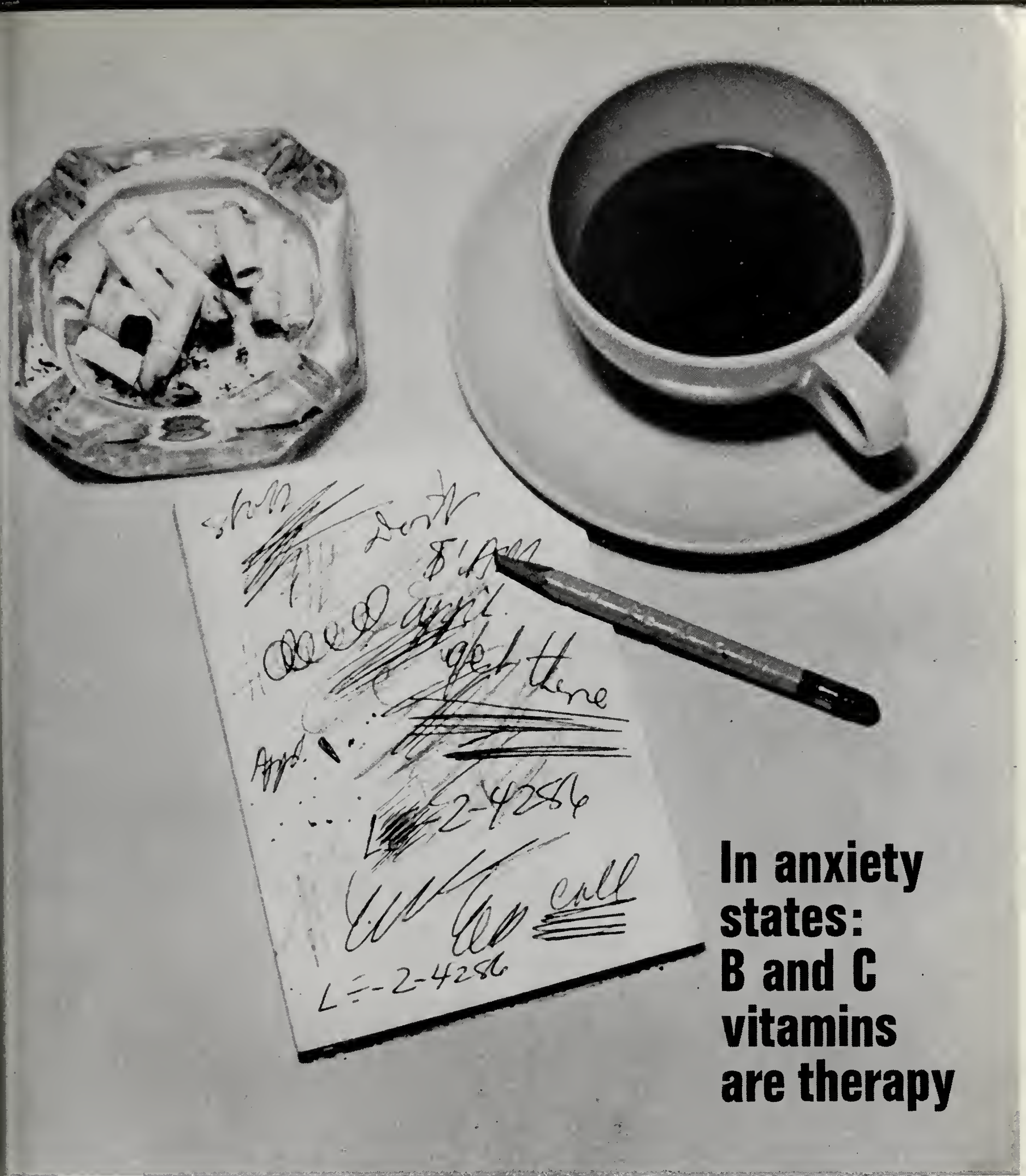
Construction by:
Coakley and Williams
2301 Kansas Avenue
Silver Spring, Maryland

Lease Arrangements by:
John J. Grady Management, Inc.
516 Wheaton Plaza Office Building
Silver Spring, Maryland
Phone: 946-2070

Call Mr. Priddy to arrange for inspection of the site at your convenience

Georgetown Doctors Park

Location: Between Old Georgetown Road and Rockville Pike on West Cedar Lane across from the National Institutes of Health



Stress formula vitamins are an important supportive measure in maintaining the nutritional status of the emotionally disturbed patient. With STRESSCAPS, B and C vitamins are present in therapeutic amounts to meet increased metabolic demands. Patients with anxiety, and many others undergoing physiologic stress, may benefit from vitamin therapy with STRESSCAPS.

STRESSCAPS®

FOR PROFESSIONAL RECOMMENDATION ONLY

Stress Formula Vitamins Lederle

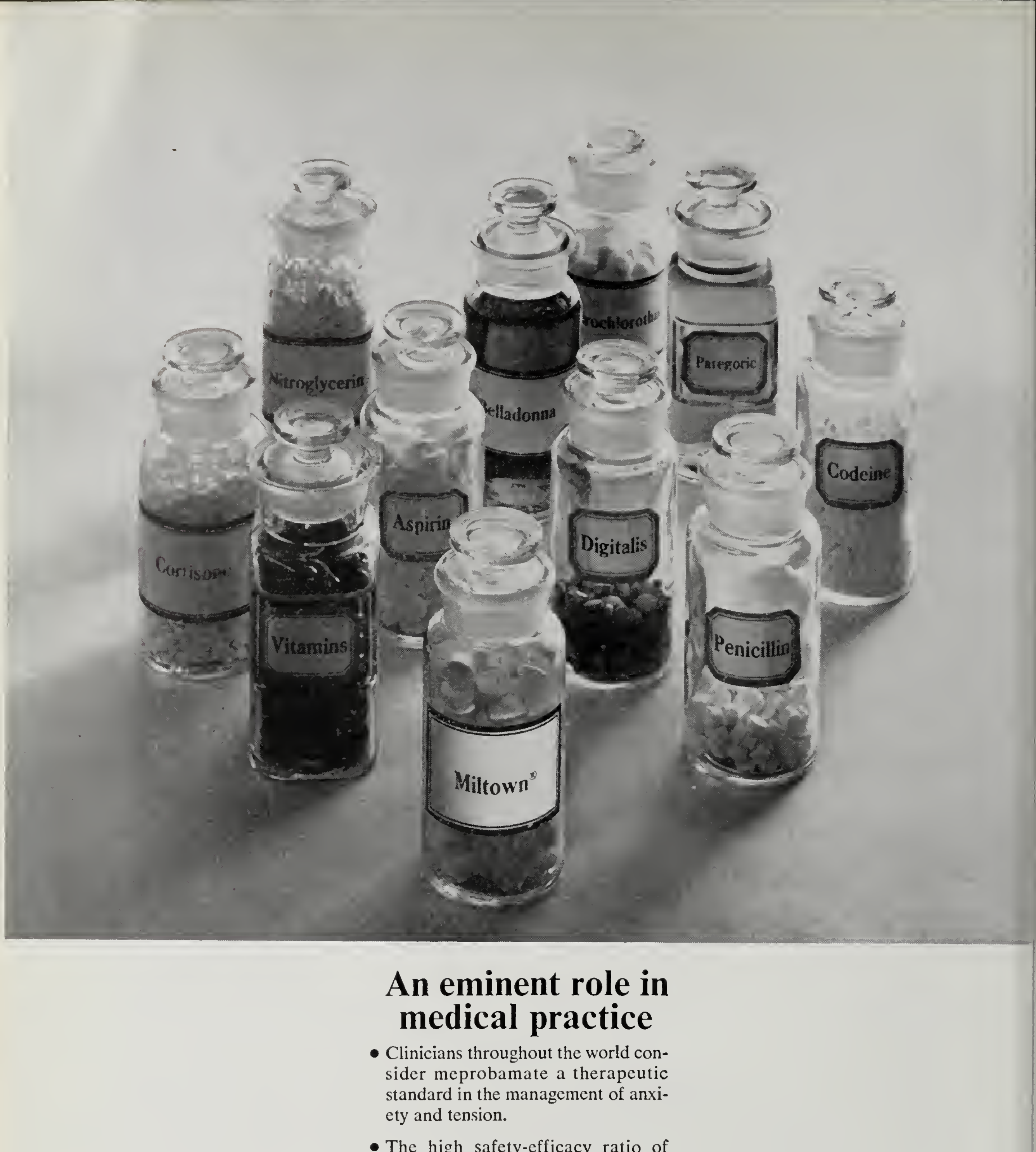
Each capsule contains:

Vitamin B_1 (as Thiamine Mononitrate)	10 mg.
Vitamin B_2 (Riboflavin)	10 mg.
Niacinamide	100 mg.
Vitamin C (Ascorbic Acid)	300 mg.
Vitamin B_6 (Pyridoxine HCl)	2 mg.
Vitamin B_{12} Crystalline	4 mcgm.
Calcium Pantothenate	20 mg.

Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

Lederle LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N. Y.

8241-4



An eminent role in medical practice

- Clinicians throughout the world consider meprobamate a therapeutic standard in the management of anxiety and tension.
- The high safety-efficacy ratio of 'Miltown' has been demonstrated by more than a decade of clinical use.

Miltown®
(meprobamate)

Indications: 'Miltown' (meprobamate) is effective in relief of anxiety and tension states. Also as adjunctive therapy when anxiety may be a causative or otherwise disturbing factor. Although not a hypnotic, 'Miltown' fosters normal sleep through both its anti-anxiety and muscle-relaxant properties.

Contraindications: Previous allergic or idiosyncratic reactions to meprobamate or meprobamate-containing drugs.

Precautions: Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of pre-existing symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side effects: Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Usual adult dosage: One or two 400 mg. tablets three times daily. Doses above 2400 mg. daily are not recommended.

Supplied: In two strengths: 400 mg. scored tablets and 200 mg. coated tablets.

Before prescribing, consult package circular.

WALLACE LABORATORIES
Cranbury, N.J.

CM-5761

NATIONAL AND REGIONAL MEETINGS

May 30–June 1: American Ophthalmological Society. The Greenbrier, White Sulphur Springs, W. Va. Address: Dr. Samuel D. McPherson, Jr., *Executive Secretary*, 1110 West Main Street, Durham, N. C.

May 30–June 2: American Urological Association. Palmer House, Chicago. Address: Mr. William P. Didusch, *Executive Secretary*, 1120 North Charles Street, Baltimore, Md. 21201.

June 2–4: American Gynecological Society. The Homestead, Hot Springs, Va. Address: Dr. Curtis J. Lund, *Secretary*, University of Rochester Medical Center, 260 Crittenden Blvd., Rochester, N. Y. 14620.

June 5–8: First International Congress on Smoking and Health. New York Hilton, New York. Address: Mr. James W. Muckell, *Manager*, Overseas Press Club Bldg., 54 West 40th Street, New York, N. Y. 10018.

June 9–12: American Association of Neuropathologists. Sheraton Park Hotel, Washington. Address: Dr. Irwin Feigin, 550 First Avenue, New York, N. Y. 10016.

June 10–12: Society of Biological Psychiatry. Sheraton Park Hotel, Washington. Address: Dr. George N. Thompson, Secretary, 2010 Wilshire Blvd., Los Angeles, Calif. 90057.

June 13–15: American Neurological Association. Sheraton Park Hotel, Washington. Address: Dr. Melvin D. Yahr, Executive Secretary, 710 West 168th Street, New York, N. Y 10032.

June 20–22: American Proctologic Society. Sheraton-Cleveland Hotel, Cleveland. Address: Dr. James A. Ferguson, *Secretary*, 320 West Lafayette, Detroit, Mich. 48226.

June 23–24: American Geriatrics Society. Palmer House, Chicago. Address: Dr. Edward Henderson, *Executive Director*, 10 Columbus Circle, New York, N. Y. 10019.

June 23–26: American Therapeutic Society. Continental Plaza, Chicago. Address: Dr. Alan Frank Kreglow, *Executive Secretary*, 1801 Eye Street, N.W., Washington, D. C. 20006.

June 23–27: American College of Chest Physicians. Sheraton-Chicago Hotel, Chicago. Address: Mr. Murray Kornfeld, *Executive Director*, 112 East Chestnut Street, Chicago, Ill. 60611.

June 25: American Association for the Study of Headache. Conrad Hilton Hotel, Chicago. Address: Dr. Seymour Diamond, *Secretary*, 5214 North Western Avenue, Chicago, Ill. 60625.

June 25: Seminar on Medicare Regulations. Palmer House, Chicago. Address: Dr. Richard F. Manegold, AMA Department of Hospitals and Medical Facilities, 535 North Dearborn Street, Chicago, Ill. 60610.

June 25–26: American Diabetes Association. LaSalle Hotel, Chicago. Address: Mr. J. Richard Connelly, *Executive Director*, 18 East 48th Street, New York, N. Y. 10017.

June 26–30: American Medical Association. Palmer House, Chicago. Address: Dr. F. J. L. Blasingame, *Executive Vice President*, 535 North Dearborn Street, Chicago, Ill. 60610.

The discomforts of

DIARRHEA
MUCOUS COLITIS
DIVERTICULITIS
SPASTIC URETERITIS
BLADDER SPASM

are relieved by
direct musculotropic action
with.....

Trocinate®

BRAND THIPHENAMIL HCl

Available in 100 milligram pink sugar-coated tablets.

The high therapeutic index permits dosage sufficient to relieve spasm promptly. The usual initial dose is 4 tablets. Maintenance dosage is usually one or two tablets 4 times a day.

Trocinate BRAND THIPHENAMIL HCl
BETA-DIETHYLAMINOETHYL DIPHENYLTHIOACETATE HYDROCHLORIDE

Directly relaxes smooth muscle spasm
Combats hypermotility
Non-mydriatic, may be used in glaucoma

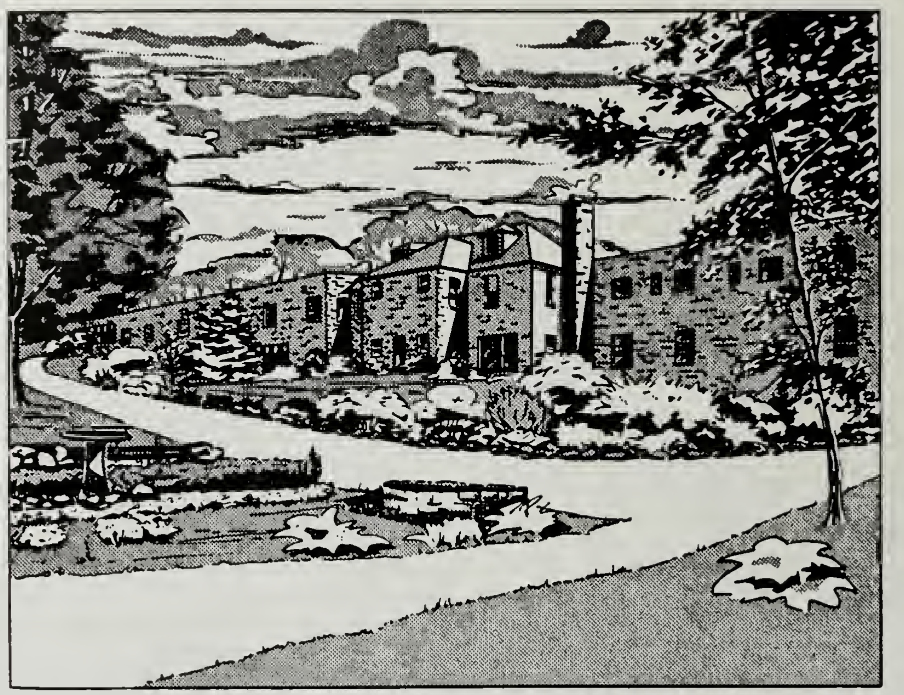
Trocinate (Thiphenamil HCl) has been found in three clinical studies. (J. Mo. Med. Assoc., 48:685-6; Med. Rec. & Annals, 43:1104-6; J. Urol., 73:487-93), to be effective and to be virtually free of side-effects. Fifteen years of wide clinical usage has affirmed the safety and effectiveness of Trocinate.

DISPENSED IN BOTTLES OF
100, 250 AND 2000 TABLETS
Literature and samples sent upon request

WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA
Manufacturers of ethical pharmaceuticals since 1856

"All the Comforts of Home"..

POST OPERATIVE
MEDICAL
CONVALESCENT
DIABETIC
PARALYTIC
INVALID
AGED
CHRONIC
AMBULATORY
RETIRED
GUESTS, ETC.



AN ULTRA-MODERN HOME IN THE SUBURBS ON TEN ACRES WITH A COUNTRY ATMOSPHERE

KENSINGTON GARDENS SANITARIUM

★ A MEDICAL INSTITUTION UNDER THE SUPERVISION OF REGISTERED NURSES ★
LICENSED BY STATE AND COUNTY

3000 McComas Avenue — Kensington, Maryland

- Rehabilitation Facilities
- Private and Semi-Private Rooms with Connecting Baths
- Beautifully Decorated
- Television in Spacious Lounges
- Large Porches
- Lovely Lawns and Shade Trees
- Supervised Diets
- Patients May Retain Their Own Physician
- 24-Hour Nursing Care
- Reasonable Rates
- Recreation and Physical Therapy

MEMBER OF

MEMBER
AND MARYLAND NURSING HOME ASSOCIATION
ACCREDITED BY THE NATIONAL COUNCIL
FOR THE ACCREDITATION OF NURSING HOMES

For Further Information Phone

933-0060 or 933-0872

Proprietors-Administrators
LILLIAN H. and
GEORGE L. BRICKER

ECONOMY

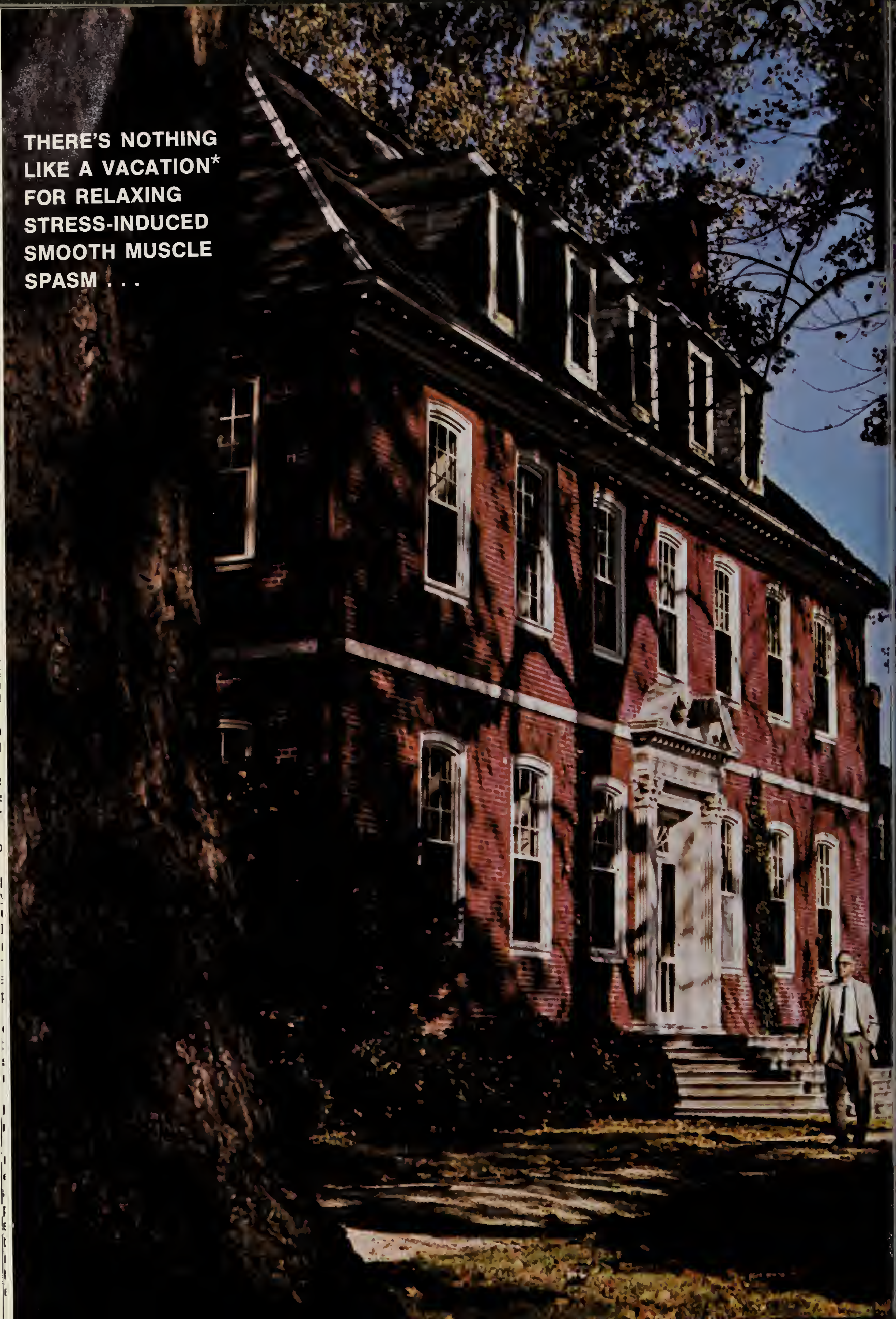
When you prescribe or recommend Allbee with C, you can be sure your patient is getting a rational, specific multivitamin formulation at an economical price. The potent formula is sensible and simple. It contains therapeutic amounts of the water-soluble B and C vitamins. These vitamins are expended rapidly in the body and need to be replenished frequently. There are no extraneous factors, no frills in Allbee with C. It's the no-nonsense vitamin in the yellow and green capsule that always gives your patient his money's worth.

Each capsule contains: Thiamine mononitrate (B_1), 15 mg.; Riboflavin (B_2), 10 mg.; Pyridoxine hydrochloride (B_6), 5 mg.; Nicotinamide, 50 mg.; Calcium pantothenate, 10 mg.; Ascorbic acid (vitamin C), 300 mg.

A. H. ROBINS COMPANY, INC.,
RICHMOND, VIRGINIA 23220
A·H·ROBINS

—a good reason for

ALLBEE® WITH C


THERE'S NOTHING LIKE A VACATION* FOR RELAXING STRESS-INDUCED SMOOTH MUSCLE SPASM . . .

. . . NOTHING, THAT IS,
EXCEPT THE SEDATIVE-ANTISPASMODIC
BENEFITS OF

DONNATAL®

There's nothing quite like a vacation to ease the pressures of the modern, "workingday" world. And for the patient who can't get away from it all, there's nothing quite like Donnatal to relax stress-induced smooth muscle spasm. For 31 years it has been the antispasmodic-sedative most often prescribed for relieving functional disturbances of tone and motility of the gastrointestinal tract.

belladonna alkaloids in optimally balanced ratio

In Donnatal, natural belladonna alkaloids are rationally balanced in a specific, fixed ratio that provides "the greatest efficacy with the smallest possible dose."[1] They avoid the clinical uncertainties of the variable tincture and extract of belladonna, and are considered superior in range of action to atropine alone.[2] Furthermore, they are generally recognized as being more effective than the synthetics for relieving visceral spasm.

phenobarbital for sedation

Years of clinical use have established phenobarbital as one of the most efficient and highly regarded sedatives. In fact, for general sedation it is the drug of choice.[3] In Donnatal, phenobarbital potentiates the spasmolytic effects of the belladonna alkaloids, lessening emotional tensions and checking the neurogenic impulses that trigger GI disorders.

more than 24 indications in PDR

Donnatal has withstood the test of time to become the classic sedative-antispasmodic because of its unsurpassed effectiveness, safety, economy, uniformity of composition, and dosage convenience. Its widespread acceptance and usage by the profession can also be attributed to its versatility in treating disorders characterized by smooth muscle spasm. There are more than two dozen distinct and separate indications for Donnatal listed in the current PDR.

IN EACH TABLET, CAPSULE, OR
(5 cc.) OF ELIXIR

hyoscyamine sulfate	0.1037 mg.
atropine sulfate	0.0194 mg.
hyoscine hydrobromide . . .	0.0065 mg.
phenobarbital	(1/4 gr.) 16.2 mg.

(warning: may be habit forming)

IN EACH EXTENTAB

hyoscyamine sulfate	0.3111 mg.
atropine sulfate	0.0582 mg.
hyoscine hydrobromide . . .	0.0195 mg.
phenobarbital	(3/4 gr.) 48.6 mg.

(warning: may be habit forming)

BRIEF SUMMARY: Blurring of vision, dry mouth, difficult urination, and flushing or dryness of the skin may occur on higher dosage levels, rarely on usual dosage. Administer with caution to patients with incipient glaucoma, or urinary bladder neck obstruction. Contraindicated in acute glaucoma, advanced renal or hepatic disease, or a hypersensitivity to any of the ingredients.

REFERENCES: 1. Vollmer, H.: Arch. Neurol. and Psychiat., 43:1057, 1940. 2. Morrissey, J.H.: J. Urology, 57:635, 1947. 3. Krantz, J.C., Jr., and Carr, C.J.: Pharmacological Principles of Medical Practice, 2nd ed., Baltimore (1954), 552.

*This one at Westover, elegant Colonial Virginia plantation, located on the James River near Richmond. Built in the early 1730's by William Byrd II, founder of Richmond, it is now the home of Mrs. Bruce Crane Fisher.

A. H. ROBINS COMPANY, INC., RICHMOND, VA.

A·H·ROBINS

in breadwinner's anxiety...

He's 40, but probably feels older. His income is average, but he thinks it inadequate. He'd like to achieve more but feels tied down. His health is good, but he thinks not.

This anxious patient and others can feel more comfortable on Vistaril... because Vistaril calms smoothly, makes them feel better without the euphoria or psychic overgratification that fosters habituation.

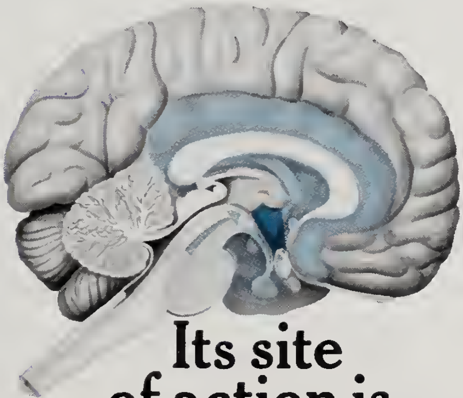
What is Vistaril? Vistaril is hydroxyzine, a tranquilizer entity, totally different from the diazepines, meprobamates and the phenothiazines. While equal to the diazepines and meprobamates in effectiveness, Vistaril has been remarkably free of the unwanted psychic and somatic reactions associated with other tranquilizing agents because its primary effect is exerted at the seat of anxiety.

Vistaril tranquilizes with less complication than do the phenothiazines. Unwanted effects, such as hepatotoxicity, blood dyscrasias, skin pigmentation, and opacities of lens and cornea, are not characteristic of Vistaril activity.

Vistaril tranquilizes with less complication than do the minor tranquilizers. Withdrawal symptoms, possible psychotropic drug incompatibilities, blood dyscrasias and hepatotoxicity, seen with some minor tranquilizers, are not characteristic of Vistaril.

No other tranquilizer is as precise, as uncomplicated, as Vistaril®

(HYDROXYZINE)



Its site of action is the seat of anxiety

Pfizer Since 1849
Science for the world's well-being

Turn page for brief summary...

The record of hydroxyzine experience:

Eight years of clinical effectiveness, over 1,000,000,000 doses prescribed, more than 500 published papers covering nearly 15,000 patients...

Contraindications: Hypersensitivity to hydroxyzine. The parenteral solution, for intramuscular or intravenous use, *must not* be injected subcutaneously or intra-arterially.

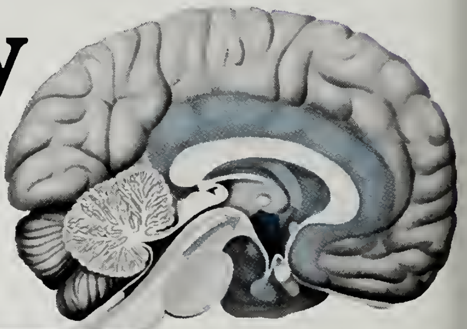
Precautions: Hydroxyzine may potentiate the action of central nervous system depressants. In conjunctive use, dosage for these drugs should be decreased. Because drowsiness may occur, patients should be cautioned against driving a car or operating dangerous machinery. The usual precautions for intramuscular injection should be followed; soft-tissue reactions have rarely been reported when proper technique has been used. On reported intravenous injection a few instances of digital gangrene have occurred distal to the injection site, considered to be due to inadvertent intra-arterial injection or periarterial extravasation. Therefore, particular caution should be observed to insure injection only into intact veins; avoid either intra-arterial injection or extravasation. Intravenous administration should be accomplished slowly, no faster than 25 mg. per minute, and not to exceed 100 mg. in any single dose.

Adverse Reactions: Drowsiness may occur; if so, it is usually transitory and may disappear in a few days of continued therapy or upon dosage reduction. Dryness of the mouth may be seen with higher doses. Involuntary motor activity has been reported in some hospitalized patients on higher than recommended dosage.

Supply: Vistaril (hydroxyzine pamoate) Capsules: 25 mg., 50 mg., 100 mg. Vistaril (hydroxyzine pamoate) Oral Suspension: 25 mg. per 5 cc. Vistaril (hydroxyzine HCl) Parenteral Solution: 25 mg./cc.—10-cc. vials, and 50 mg. /cc.—2-cc. and 10-cc. vials.

More detailed professional information available on request.

The Vistaril site of action is the seat of anxiety



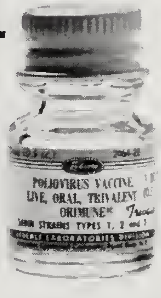
No other tranquilizer is as precise, as uncomplicated, as Vistaril® (HYDROXYZINE)

Science for the world's well-being®

Pfizer
Since 1849

PFIZER LABORATORIES
DIVISION, CHAS. PFIZER & CO., INC. NEW YORK, N.Y. 10017

single-dose vials for convenient and economical polio immunization



ORIMUNE® TRIVALENT
POLIOVIRUS VACCINE, LIVE, ORAL **SABIN STRAINS TYPES 1, 2 and 3**

Fast, simple administration—and economy for the patient—make the new 0.5 cc single-dose vial of ORIMUNE Trivalent ideal for private practice. (Packaged 5 to a box with 5 sterilized disposable droppers for your convenience.)

(Also available in 2 cc and 2 drop dosage forms.)

Only 2 doses required for complete, initial immunization for patients more than a year old. *Effectiveness*—may be expected to confer active immunity against all three types of poliovirus infection in at least ninety percent of susceptibles only if given at full dosage, as directed. No characteristic *side effects* have been reported. There are, however, certain *contraindications*. These are, broadly: acute illness, conditions which may adversely affect immune response, and advanced debilitated states. In these, vaccination should be postponed until after recovery.

In infants vaccination should not be commenced before the sixth week of life. Do not give to patients with viral disease, or if there is persistent diarrhea or vomiting. ORIMUNE and live virus measles vaccine should be given separately.

Dosage—initial immunization: two doses each given orally at least 8 weeks apart. (Give a third dose to infants at 10-12 months.) Booster immunization: one dose, given orally. See package literature for full directions.

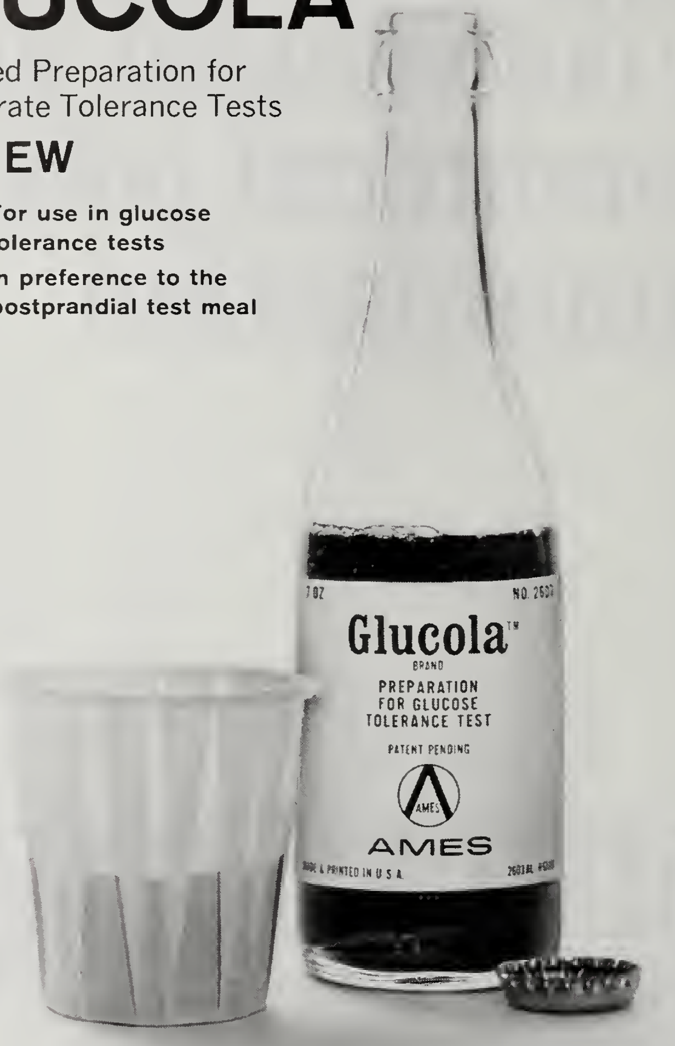
LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York Lederle
660-6—3761

GLUCOLA™

Carbonated Preparation for
Carbohydrate Tolerance Tests

NEW

- For use in glucose tolerance tests
- In preference to the postprandial test meal



A NEW SOLUTION FOR AN OLD PROBLEM

Ready to use • Pleasant tasting cola flavor • Well tolerated

A 7-ounce bottle of GLUCOLA provides a liquid oral loading dose equivalent to 75 Gm. of glucose* for carbohydrate tolerance testing. GLUCOLA avoids the nausea that frequently results from lingering sweet laboratory preparations, and the occasional emesis that necessitates rescheduling the test. With GLUCOLA, no time is lost weighing and mixing glucose "cocktails"—only a bottle opener is needed.

753(R2)64

*The rapidly hydrolyzable saccharides in this formulation assure optimum absorption and glucose levels comparable to those obtained with a 100 Gm. loading dose.

Available through your regular supplier: cartons of 12 7-oz bottles (6 bottles per pack, 2 packs per carton).

Ames Company, Inc.
Elkhart, Indiana

AMES
AMES

OXYGEN
24-HOUR SERVICE
363–9595

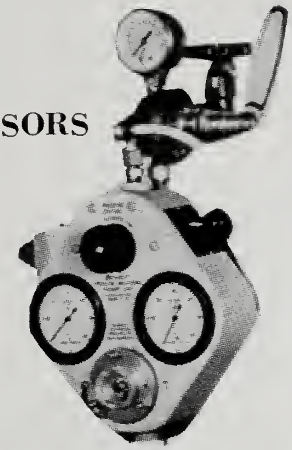
I P P B

COMPRESSORS

OXYGEN

SALES

RENTALS



Inhalation Therapist on Duty
EM 3–9595

ACCREDITED SURGICAL CO.
Medical and Surgical Supplies
3226 Wisconsin Ave., N.W.

MAXWELL
AND
TENNYSON
INC.
PHARMACISTS

"Where Pharmacy is a Profession"
M+T
Washington, D. C.

1801 Eye Street **NAtional 8-0206**
1835 Eye Street **STerling 3-0360**
1726 Eye Street **298-6540**

Prescriptions called for and delivered without extra charge

Biologicals–Vaccines
Serums
Hypo-Allergenic Cosmetics

EACH PATIENT
is precisely measured for a Jobst support.

Jobst venous pressure gradient supports are custom-made from precise measurements of your patient's extremity. Each support is individually engineered to exert the correct counter pressure according to your diagnosis and each support is guaranteed to fit, no strangulation, no puddling, no tourniqueting. Our service center is staffed with experts who will measure and fit your patient on your prescription only.

There is no charge for this service. Here is an advanced, clinically proved program of treatment for vascular deficiencies. For prescription blanks and medical reprints, have your secretary phone or drop us a card. Jobst Service Center 818 Eighteenth St. N.W. Phone: 298-5530 Washington, D. C. 20006

©1966 Jobst

UNIVERSITY

MEDICAL BUILDING

2143 K STREET, N.W.
OCCUPANCY FALL 1966

ADJACENT TO GEORGE WASHINGTON UNIVERSITY HOSPITAL
SEVERAL CHOICE SUITES AVAILABLE IN WASHINGTON'S NEWEST MEDICAL BUILDING
CUSTOM DESIGNED FOR YOUR REQUIREMENTS

SHANNON·&·LUCHS
Realtors Since 1906

900 SEVENTEENTH STREET, N.W.

CALL MR. MORRISON
296-2345

makes sleep irresistible

nidar®

EACH TABLET CONTAINS:

Pentobarbital Sodium	25 mg.
Secobarbital Sodium	25 mg.
Butabarbital Sodium	7.5 mg.
Phenobarbital	7.5 mg.

(WARNING: MAY BE HABIT FORMING)

ARMOUR PHARMACEUTICAL COMPANY
Chicago, Illinois, U.S.A.

nidar®

Sleep comes easy...lingers...departs naturally

Gentle doses of 4 barbiturates assure uninterrupted sleep

2 barbiturates act fast...in 20 to 30 minutes

2 long-range barbiturates come into play to sustain sleep for up to 8 hours

Tiny amounts of individual barbiturates means Nidar is well tolerated

Patients enjoy a refreshing, clear-headed wake-up

makes sleep irresistible

IN BRIEF:

EACH TABLET CONTAINS:

Pentobarbital Sodium	25 mg.
Secobarbital Sodium	25 mg.
Butabarbital Sodium	7.5 mg.
Phenobarbital	7.5 mg.

(WARNING: MAY BE HABIT FORMING)

Dosage: One or two tablets, one-half hour before bedtime.

Indications: For night-time sedation and refreshing sleep up to eight hours.

Contraindications: Patients sensitive to barbiturates. Use with caution in the presence of moderate to severe hepatic disease.

Supplied: Bottles of 100 tablets.

CAUTION: Federal law prohibits dispensing without a prescription.

ARMOUR PHARMACEUTICAL COMPANY
Chicago, Illinois, U.S.A.

An antibiotic of choice is one that works

TAO works

Susceptibility Results
Staphylococci [2,3,1]

# OF CULTURES	YEAR	% EFFECTIVE
6,725	1962	88.6%
5,440	1963	88.0%
10,384	1964	88.5%

β-Hemolytic Streptococci [2,3,1]

# OF CULTURES	YEAR	% EFFECTIVE
2,448	1962	89.5%
1,519	1963	95.2%
2,492	1964	96.7%

The Product

In a world study of antibiotics *in vitro*[1], TAO had an overall effectiveness of 87.3%, higher than chloramphenicol and erythromycin, and significantly higher than tetracycline and penicillin.

The Plus...Consistent Performance

Yet antibiotics must not only work. They must work consistently. Here are the results from the largest study of microbial susceptibility ever undertaken. In 29,048 cultures of overt staphylococcal and β-hemolytic streptococcal infections, note the consistency of results with TAO.

TAO®

[triacetyloleandomycin]

J. B. Roerig and Company, New York, New York 10017
Division, Chas. Pfizer & Co., Inc., Science for the World's Well-Being®

TAO Rx information

Indications: The bacterial spectrum includes: streptococci, staphylocci, pneumococci and gonococci. Recommended for acute, severe infections where adequate sensitivity testing has demonstrated susceptibility to this antibiotic and resistance to less toxic agents. **Contraindications and Precautions:** TAO (triacetyloleandomycin) is not recommended for prophylaxis or in the treatment of infectious processes which may require more than ten days continuous therapy. In view of the possible hepatotoxicity of this drug when therapy beyond ten days proves necessary, other less toxic agents, of course, should be used. If clinical judgement dictates continuation of therapy for longer periods, serial monitoring of liver profile is recommended, and the drug should be discontinued at the first evidence of any form of liver abnormality. It is contraindicated in pre-existing liver disease or dysfunction, and in individuals who have shown hypersensitivity to the drug. Although reactions of an allergic nature are infrequent and seldom severe, those of the anaphylactoid type have occurred on rare occasions. **References:** 1. Isenberg, Henry D.: Health Laboratory Science **2**:163-173 (July) 1965. 2. Fowler, J. Ralph et al: Clinical Medicine **70**:547 (Mar.) 1963. 3. Isenberg, Henry D.: Health Laboratory Science **1**:185-256 (July-Aug.) 1964.

CAPITAL NURSE REGISTRY
(Est. 1910)
Licensed
Practical
Nurses and
Practical
Nurses
Recommended
by Physicians

All Nurses Have Had Hospital Training

One of Washington's outstanding
Registries, serving physicians
and surgeons since 1910

LICENSED BY DISTRICT OF COLUMBIA

24 Hour Telephone Service

RAndolph 3-2600 or 3-1771

Physicians—
ATTENTION!
Now ready for occupancy
BOULEVARD MEDICAL CENTER
8301 Arlington Blvd. (Rte. 50)
—Just west of Gallows Road
—Just west of Rte. 495
—Adjacent to Fairfax Hospital

In the heart of Northern Virginia's
"hottest" growth area!

Leasing information:
MR. APPEL, 527-6660
POMPONIO PROPERTIES, INC.

FINANCIAL SERVICES FOR PHYSICIANS

Complete Programs of Life Insurance,
Non-Cancellable Disability Income and Mutual Funds

Keogh Pension and Profit-sharing Plans

EUGENE F. ROESSER, C. L. U.

1130 SEVENTEENTH STREET, N.W.
WASHINGTON, D.C. 20036

DISTRICT 7-1114

In the Chevy Chase Area
FOR THE BEST IN DRUGS AND SERVICE
IT'S
HIGGER'S
ESTABLISHED 1930

Complete Biological Stocks
HIGGER'S DRUGS, INC.
5015-17-19 Connecticut Avenue
Phone: Woodley 6-1815
Note: Special physicians' phone to Prescription Department: Woodley 6-5555

Surgical Supplies and Equipment

Complete Fitting Service for
Ladies and Men

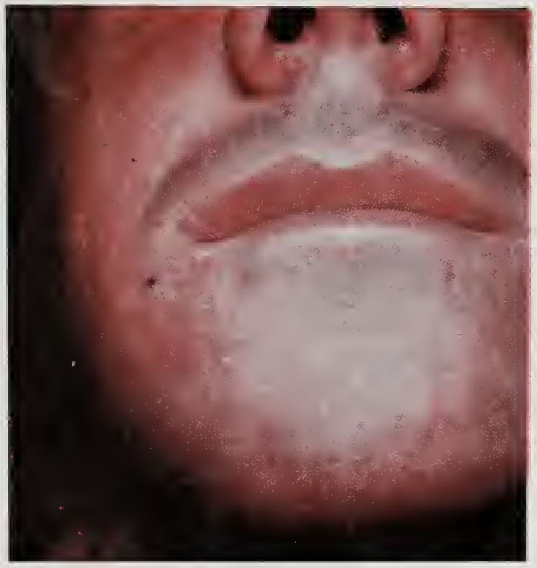
NELSON KLOMAN SURGICAL SUPPLY CO.
1018 - 18th Street, N.W.
Washington 36, D. C.

Telephone: FEderal 8-5245

TOPICAL TREATMENT

TYPICAL RESULTS

PRIMARY PYODERMA



AFTER TREATMENT WITH
'NEOSPORIN' ANTIBIOTIC OINTMENT
AND SALINE COMPRESSES

with 'NEOSPORIN'® brand

Polymyxin B-Neomycin-Bacitracin

ANTIBIOTIC OINTMENT

Each gram contains:

'Aerosporin'® brand Polymyxin B Sulfate	5,000 Units
Zinc Bacitracin	400 Units
Neomycin Sulfate (equivalent to 3.5 mg. Neomycin Base)	5 mg.

Tubes of ½ oz. and 1 oz.

- clinically effective
- comprehensive bactericidal action against most Gram-negative and Gram-positive organisms, including Pseudomonas
- rarely sensitizes

For the eradication of infectious organisms in a wide range of dermatologic disorders: impetigo, ecthyma, pyodermas, sycosis vulgaris, paronychia, traumatic lesions, eczema, herpes and seborrheic dermatitis. Prophylactically, for protection against bacterial contamination in burns, skin grafts, incisions and other clean lesions, abrasions and minor cuts and wounds.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs.

Contraindication: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, New York

ESTABLISHED 1873 WOMEN ASSISTANTS

In Washington and Suburbs

CALL COLUMBIA 5-7023
(*Six Trunk Lines*)

The S. H. Hines Company

Funeral Home

2901-03-05-07 FOURTEENTH STREET N.W
Northeast corner Harvard and 14th Streets

W. R. FRANK HINES
President and General Manager

MODERN AIR-CONDITIONED ROOMS WITH CHAPEL, PIPE ORGAN AND REPOSING ROOMS ARRANGED TO MEET EVERY REQUIREMENT AT NO ADDITIONAL CHARGE. CREMATIONS.

No forfeiture of VETERAN'S BURIAL ALLOWANCE

THE EXPENSE IS A MATTER OF YOUR OWN DESIRE

No Branch Establishments
Convenient parking facilities adjoining Funeral Home

one mid-morning

one mid-evening

New 300 mg tablet It's made for b.i.d.

For Adults–2 tablets provide a full 24 hours of therapy...with all the extra benefits of DECLOMYCIN...lower mg intake per day...proven potency... 1-2 days' "extra" activity to protect against relapse or secondary infection.

DECLOMYCIN®
DEMETHYLCHLORTETRACYCLINE
300mg FILM COATED TABLETS

Effective in a wide range of everyday infections—respiratory, urinary tract and others—in the young and aged—the acutely or chronically ill—when the offending organisms are tetracycline-sensitive.

Warning — In renal impairment, usual doses may lead to excessive systemic accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of discomfort.

Precautions and Side Effects — Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. Use of demethylchlortetracycline during tooth development (last trimester of pregnancy, neonatal period and early childhood) may cause discoloration of the teeth (yellow-grey-brownish). This effect occurs mostly during long-term use but has also been observed in short treatment courses. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment. Side reactions include glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis and dermatitis. If adverse reaction or idiosyncracy occurs, discontinue medication and institute appropriate therapy. Anaphylactoid reactions have been reported.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products.

Capsules: 150 mg of demethylchlortetracycline HCl.

Tablets: film coated, 300 mg, 150 mg, and 75 mg of demethylchlortetracycline HCl.

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York

Lederle

674-6—3838

Low host resistance?

Consider the "extra" antibacterial activity of Ilosone®

Occasionally, therapeutic failure is due to the patient's inability to mobilize his defenses sufficiently to overcome infection. Typical of this is the debilitated patient, the premature infant, or the diabetic. It is in these patients that the high levels of antimicrobial activity of Ilosone are especially useful. Ilosone has demonstrated antibacterial levels two to four times those of erythromycin base or stearate. Furthermore, it attains them earlier and maintains them longer. Even the presence of food does not appear to affect the activity of Ilosone.

Contraindications: Ilosone is contraindicated in patients with a known history of sensitivity to this drug and in those with preexisting liver disease or dysfunction.

Side-Effects: Even though Ilosone is the most active oral form of erythromycin, the incidence of side-effects is low. Infrequent cases of drug idiosyncrasy, manifested by a form of intrahepatic cholestatic jaundice, have been reported. There have been no known fatal or definite residual effects. Gastro-intestinal disturbances not associated with hepatic effects are observed in a small proportion of patients as a result of a local stimulating action of Ilosone on the alimentary tract. Although allergic manifestations are uncommon with the use of erythromycin, there have been occasional reports of urticaria, skin eruptions, and, on rare occasions, anaphylaxis.

Dosage: *Children under 25 pounds*—5 mg. per pound of body weight every six hours. *Children 25 to 50 pounds*—125 mg. every six hours. *Adults and children over 50 pounds*—250 mg. every six hours. For severe infections, these dosages may be doubled.

Available in Pulvules®, suspension, drops, and chewable tablets. Ilosone Chewable tablets should be chewed or crushed and swallowed with water.

Ilosone®

Erythromycin Estolate

Additional information available to physicians upon request. Eli Lilly and Company, Indianapolis, Indiana. 501280

Lilly

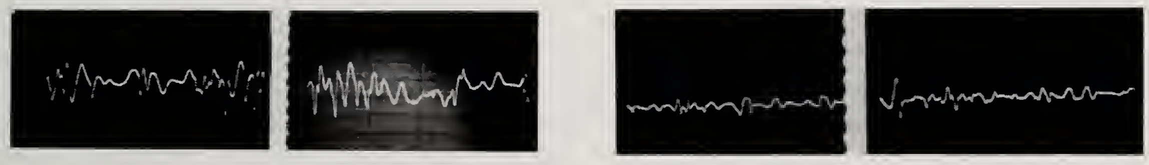
MEDICAL ANNALS
of the District of Columbia

May 1966 VOLUME XXXV • NUMBER 5

Electromyographic Evidence of DDT-induced Myasthenia*

ELOISE W. KAILIN, M.D.†, AND ALICIA HASTINGS, M.D.‡

THE DIAGNOSIS of allergic reactions to foods, drugs and chemicals often requires observation during a period of avoidance followed by deliberate exposure to the food, drug or chemical in question.[1] By this means an acute reaction is provoked which allows disclosure of specific etiologic factors in chronic illness. This communication is a result of the discovery that mental, emotional and muscular effects can be produced at will in the testing laboratory by exposure of selected persons to the pesticide *di*chloro*di*phenyl*tri*chloroethane (DDT) in concentrations encountered daily by the population at large. DDT-susceptible persons usually are intolerant to many other fat-soluble substances also, such as plastics, perfume, automobile exhaust fumes, and fat solvents.



Before DDT

After DDT

FIG. 1. Electromyogram (patient no. 6): right middle deltoid, calibration 1,000 μv. Test substance: DDT 1,000 ppm in oil, infranasal. Exercise: holding 5-lb. weight at arm's length for 30 seconds.

Effects on the central nervous system are evidenced by dimming of vision, drowsiness, slowing of thought and motor activities, dysphasia, and inability to recall or concentrate on a topic. Anxiety and emotional depression also occur, possibly as a reaction to the other disabilities. Hallucinations may follow prolonged or heavy exposure. Effects on muscles are suggested by symptoms of weakness, fatigue, dysphagia and ataxia. Electromyography (EMG) has been found to provide a tool whereby objective measurements may be made of the muscular weakness so induced (figure 1). Depression of EMG potentials from a toxic stimulus has been described following carbon monoxide poisoning and following acute anoxia (as produced by arterial occlusion).[2] Tobacco smoking induces polyphasic potentials.[3] A general depression of the amplitude of EMG potentials elicited by other toxic substances has not to our knowledge previously been reported. Muscle is notoriously resistant to most intoxicants.[4] Evidence is presented that the toxic substances act central to the myoneural junction and probably at one or more cerebral sites. These experiments point to a degree of lability in EMG potentials not previously suspected with depression produced not only from a toxic stimulus but, at least in our special subjects, from psychic stress as well. We do not know whether an antigen-antibody mechanism mediates the response observed or whether we are witnessing a metabolic intolerance or toxic response unrelated to the allergic concept. Because a high proportion of susceptible persons react to DDT, and because dilutions suitable for testing can be made indistinguishable from control preparations, the major part of our investigation has been conducted with pure DDT.

---

* This study was supported in part by Public Health Service Grant No. GM 11886-02 and the Division of Physical Medicine of Howard University College of Medicine.

† Clinical Assistant Professor of Medicine, Howard University College of Medicine, Washington, D.C. 20001.

‡ Clinical Assistant Professor of Physical Medicine, Howard University College of Medicine.

Materials and Methods

The test substance was crystalline DDT dissolved in a preservative-free food oil (Hain's safflower oil) to make concentrations of 1.0, 0.1 and 0.01 mg. DDT/ml. or 1,000, 100 and 10 ppm respectively. Gas chromatography of an aliquot of the 0.01 mg./ml. solution disclosed the presence of 0.009 mg./ml. P, P′ DDT/ml. and 0.005 mg./ml. of O, P DDT. The diluent alone served as the control. Solutions were code-labeled. Neither test subjects nor examiners nor 8 other persons were able to distinguish test from control solutions by odor. Solutions were placed in a 1.0 ml. glass syringe, the hub of which was held 1 to 2 inches below the patient's nostrils for 2 minutes. If there was no subjective reaction by this time in the initial experiment, the syringe contents were expelled under the tongue and held for 2 minutes, then swallowed. Later only the infranasal route of exposure was used.

In the initial experiment a needle electrode was inserted in the middle belly of the right deltoid muscle, and a surface-ground electrode was placed a few inches below this on the arm. The needle was left in place throughout the experiment. Later, other muscles were tested, and a double coaxial needle not requiring a separate point of reference was used. The needle was attached to a Teca 2-channel electromyograph. Recordings were made of the muscle at rest to ascertain whether any isolated spontaneous motor unit contractions were present. Recordings were also made during exercise. A fixed pattern of exercise was carried out as a baseline study and after each presentation of test or control substances.

In studying the deltoid muscle, sustained resistance was tested by holding a specified weight at arm's length for 30 seconds, repetitive activity by raising and lowering the arm 10 times in time to a metronome, maximal activity by extension of the arm against the physiatrist's downward thrust, and moderate activity by a single gentle raising and lowering of the arm. Studies of nerve conduction time and the effect of repetitive stimulation on successive muscle contractions were made with a coaxial needle in the abductor digiti quinti, and electrical stimuli were delivered through a surface electrode to the ulnar nerve at a rate of 3 per second. The intensity of the stimulus was regulated to exceed maximal stimulation. The resulting potentials were visualized on the oscilloscope and were recorded on sound tape. Readings were made of the average height of the potentials by inspection. By replaying the tape it was possible to obtain repeated readings of the record for verification.

The subjects selected had been clinically diagnosed as hypersusceptible to DDT by avoidance of many kinds of additives followed by single-blind tests with DDT. They appeared to have toxicologic decompensation of a broad type as evidenced by similar concomitant cerebral and myasthenic responses to small amounts of airborne perfume, automobile exhaust fumes, turpentine, and many other chemically diverse stimuli. The diagnostic technique and clinical descriptions of 3 typical patients, 2 of whom served as subjects in these studies, appear in an earlier communication.[1]

The abbreviation EMG will be used to replace the terms electromyography, electromyographic and electromyogram.

Initial Experiment

In this study 2 patients were brought into the laboratory at the same time and were prepared for EMG of the right deltoid muscle. Neither the patients nor the physiatrist was aware of the identity of the testing substances until all results were recorded. Baseline readings were taken on both patients. Patient no. 1 received 2 exposures to control solution with neither subjective nor objective evidences of response, while patient no. 2 received 1 control exposure and 2 airborne exposures to DDT. Both DDT exposures promptly produced subjective symptoms and inhibition of electrical activity in her working muscles. In the interval between exposures, a "recovery" reading was obtainable in the one patient. Subsequently in the experiment DDT challenge of patient no. 1 induced EMG changes first and shortly thereafter, subjective effects.

It should here be noted that while all readings are presented in terms of average amplitude of the EMG spikes, other changes also take place. The spike amplitude is progressively reduced over the 30-second period of sustained resistance. This fading of potentials coincides with muscular weakness which causes the subjects to protest that they can hardly sustain the weight. They

TABLE 1: Average Myographic Potentials (Microvolts)

	Time of EMG Reading	Sustained Resistance 30 Seconds	Timed Repetitive Activity	Maximal Effort	Minimal to Moderate Effort
Patient No. 1		(3 lb.)			
Baseline	2:40 p.m.	650	700	850	550
Control oil no. 1	3:10	625	650	900	525
Control oil no. 2	3:37	600	625	950	550
3:43–3:48 sniffed, ingested DDT .01 mg./ml.	3:53	450	500	800	450
3:49–4:02 sniffed DDT 0.1 mg./ml.	4:02	475	450	800	450
4:09–4:15 sniffed DDT 0.1 mg./ml.	4:15	475	450	775	400
Patient No. 2		(5 lb.)			
Baseline	2:30 p.m.	1800	1200	3000	1750
Control oil no. 1	2:55	2000	1500	2250	1250
3:02–3:10 sniffed DDT .01 mg./ml.	3:05	1350	1050	1900	1050
	3:27	2250	2000	2100	1000
3:36–3:42 sniffed DDT .01 mg./ml.	3:42	1500	1250	1650	950
	3:57	1650	1800	2500	1350

splint their bodies with the trunk muscles, grip the chair with the opposite hand for support, clench their teeth, and sometimes in spite of this cannot keep the weight at arm's length for the full 30 seconds.

The sequence of values for baseline and control readings and the response to DDT challenges are shown in table 1. Figure 2 portrays changes occurring in average potential height for sustained resistance and repetitive activity at separate

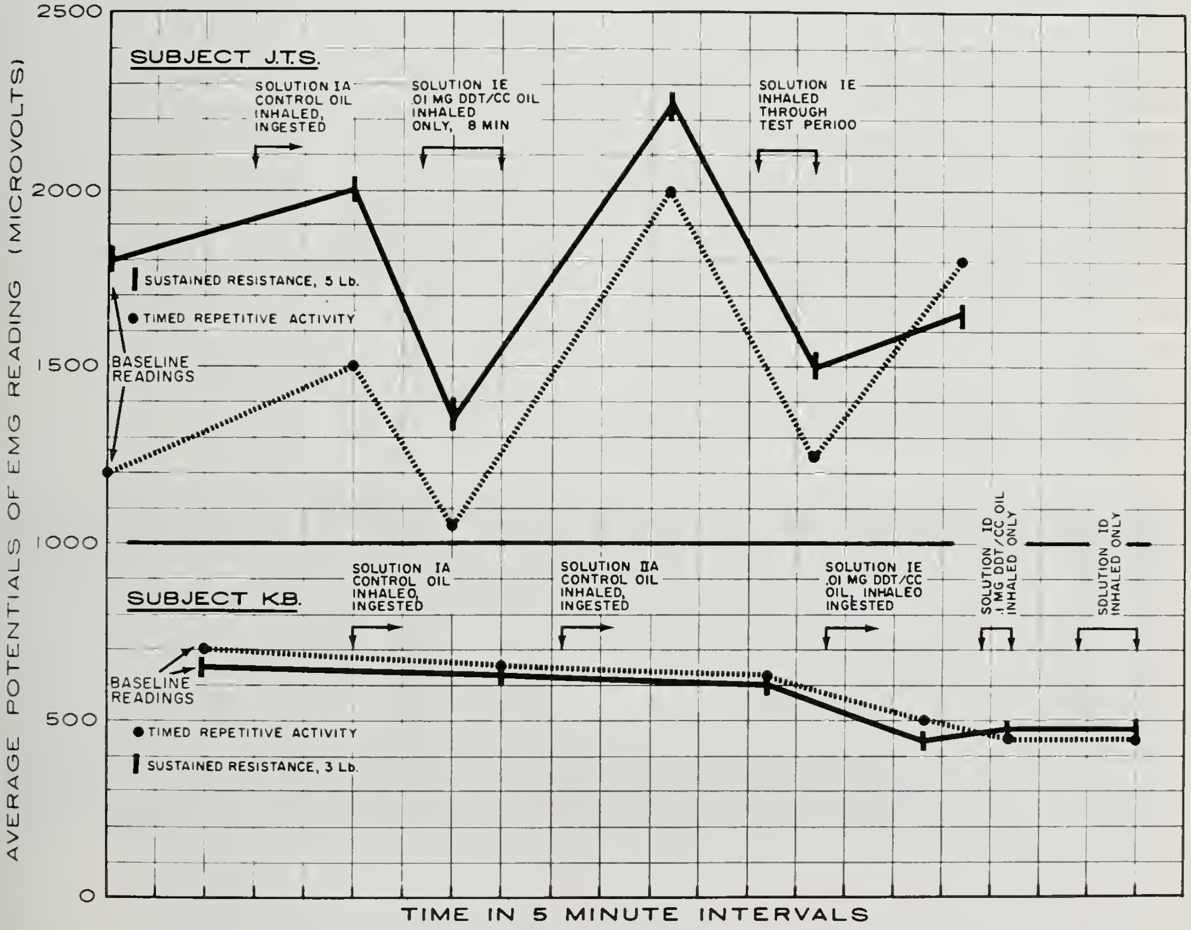


FIG. 2. Response of EMG potentials to DDT in humans.

points in time. These are the 2 exercises which are least influenced by judgment or sense of well-being and which are therefore relatively reproducible tasks. An increase in amplitude of potentials reflects the recruitment of a greater number of motor units with increasing demand for muscular work. With a constant work load one would expect the potentials to be roughly reproducible for a given muscle area in a given patient.[5] In this experiment the degree of reproducibility for one of our subjects is illustrated by the 3 sets of control results for patient no. 1.

Patient No. 1 on performing sustained resistance, holding a 3 lb. weight for 30 seconds, produced average spike potentials which were 650, 625, and 600 μv on baseline and 2 control trials over almost a 1-hour period, and repetitive activity yielded 700, 650 and 625 μv in the same series of trials. These contrast with an abrupt drop 10 minutes after starting the exposure to 0.01 mg./ml. DDT to 450 μv on sustained activity and 500 μv on repetitive activity. Indeed, all work tasks elicited somewhat depressed potentials after DDT exposure. The absence of subjective symptoms to her first DDT challenge was followed by the planned sequence of dose administration of the test substance, namely, inhalation for 2 minutes followed by sublingual exposure for 2 minutes, followed by ingestion of 1.0 ml. This was the routine followed for the control presentations as well as in this experiment. After 15 minutes no subjective effects were noted despite the EMG changes. She was again challenged, this time with 0.1 mg. DDT/ml. In about 2 minutes her face suddenly flushed and her eyes filled with tears. The stimulus was removed, and the EMG was recorded. Her potentials remained at approximately the same depressed amplitude previously recorded. Seven minutes later the same stimulus was placed under the nose again for a total of 6 minutes. Although by this time the subject showed considerable incoördination in carrying out the exercise routine there was no further depression of potentials.

Patient No. 2, after baseline determinations, was challenged with a control. There were no subjective symptoms, and a slight (learned-response?) increase in EMG occurred. At this point she was again challenged, this time with 0.01 mg. DDT/ml. Within 2 minutes she became drowsy and her eyelids felt heavy. The EMG was recorded with the solution still under her nose. Exposure time was 7 minutes. She became hoarse and coughed toward the end of this period. She was not exposed by ingestion. The average height of her potentials was now found to be reduced below baseline levels on all work tasks. Sixteen minutes after the DDT solution was removed she felt better, and the EMG was repeated. Her potentials at this point were increased beyond baseline levels for sustained resistance and repetitive activity. Another challenge was administered of the same concentration of DDT. Her symptoms returned almost immediately and potentials again dropped on all tasks.

Effect of DDT on Successive Induced Muscle Contractions

Johns, Grob and Harvey[6] have shown that in myasthenia gravis when a train of electrical impulses are sent to a muscle to produce a series of contractions there is an increasing metabolic block at the motor end-plate and progressive diminution in the ability of the motor units to respond. This is evidenced by successively diminished amplitude of the EMG spikes.

Two additional sensitive subjects were selected for study of the abductor digiti quinti muscles of the right hand. Electrical stimulation was administered to the ulnar nerve at the elbow. No successive decreases in amplitude were found in either subject either before or after an induced DDT reaction.

Patient No. 3 prior to DDT exposure nerve stimulation elicited muscle potentials averaging 6,250 μv. There were no subjective changes following 5 minutes' infranasal exposure to 0.1 mg. DDT/ml. (100 ppm). She was next similarly exposed for 5 minutes to 1.0 mg. DDT/ml. At this dose after 1 minute, 45 seconds she noted a salty taste in the mouth followed by nuchal tenderness, sense of the throat being swollen, and a sense of heaviness in her chest. Her face became flushed. Starting at that time spike potentials at values of 6,000, 7,500 and 10,000 appeared in response to separate ulnar stimulations. Seven minutes after cessation of exposure she became drowsy. Her pulse which initially was 79/min. slowed to 67. Her electrocardiogram, taken through this study, showed no other changes. Her mouth was dry and the sensorium dulled. Ulnar stimulation was repeated and elicited average potentials of 3,750 μv. The deltoid was tested only after the second DDT presentation (table 2). Potentials were low and faded rapidly. As she recovered her potentials increased. Slight improvement was noted 20 minutes after stimulation, and at 30 minutes the change in electrical performance in the deltoid was clearly more adequate.

Patient No. 4. The abductor digiti quinti responded to electrical ulnar stimulation with potentials ranging from 750 to 1,200 μv. EMG of the right middle deltoid on sustained resistance gave potentials of 800 μv, fading to 600 μv as she tired (table 2). She was exposed to 0.1 mg. DDT/ml. by infranasal route for 5 minutes. Within 3 minutes she experienced a sudden flash of dizziness, felt as if she didn't care about anything and as if she was removed from reality. Her ears "rang." After about 7 minutes she suddenly looked very frightened and complained that all the objects

TABLE 2: Results of Electromyography: Average Potential Amplitude of Deltoid Muscle (30-second Sustained Resistance)

(Arrow indicates fading over period of work)

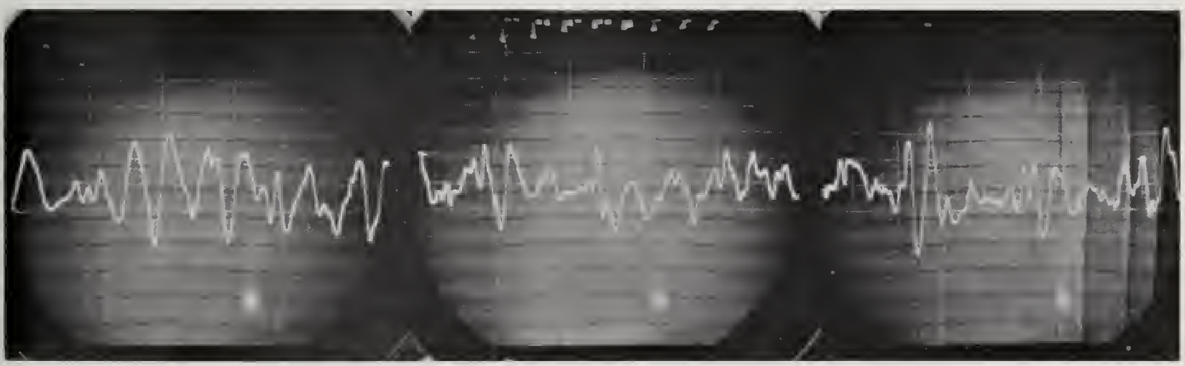
Patient	Before DDT	After DDT	Recovery
	μv	μv	μv
No. 1 (Baseline) (a)	650	450, 475, 475	—
(Control) (b)	625		
(Control) (c)	600		
No. 2 (Baseline) (a)	1800	1350	2250
(Control) (b)	2000	(Repeat DDT) 1500	1650
No. 3		325 → 175 → 150	20 min. 350 → 300 → 200
			30 min. 500 → 425 → 300
No. 4 (Baseline) (a)	800 → 600	500 → 300 (painful)	600 → 400
No. 5 (Baseline) (a)	2500 → 2750 → 2250	1625 → 1000	2000 → 1750
(Control) (b)	1500 → 1700 → 1200	(Repeat DDT) 2000 → 1000	
		(Counting) 2250 → 1750	
No. 6 (Control) (a)	1200 → 1000	(a) 100 ppm, 5 min., 1500 → 1000	—
(Control) (b)	1500 → 1000	(b) 1000 ppm, 5 min., 1750 → 750	
		30 min. after b: 750 → 500	

around her had just become much larger than normal and that the vertical objects on the wall seemed to be moving. By covering the eyes alternately it was determined that the right eye was more affected than the left. She was dizzy, sweaty, and flushed. Stimulation of the ulnar nerve at this time produced potentials in the abductor digiti quinti of 1,200 μv, but the potentials in the deltoid muscle on sustained resistance were reduced. The effort to sustain the weight was painful whereas it had not been so earlier. After another 30 minutes there was partial recovery in the potentials in the deltoid muscle and the perceptual symptoms had abated.

Effect of Psychic Stimuli on EMG

Patient no. 5 is an unusually warm, reactive person. She developed synchronous repetitive spasms of both rectus abdominis muscles apparently as a psychosomatic-conditioned response to noxious odors. These spasms were inhibited by DDT. EMG potentials of the deltoid muscle were greatly inhibited when she was tested with the diluent alone. Actual exposure to DDT produced similar inhibition of these potentials but in addition was followed by slowed muscular performance and incoördination. When EMG potentials were already depressed by DDT exposure mental work increased them and improved muscular performance (figure 3).

Patient No. 5 experienced spasms occurring simultaneously in both rectus abdominis muscles. Each spasm was of short duration, and spasms were repeated in much the same manner as seen in hiccough-



Before DDT After DDT After DDT, Starting Mental Task

FIG. 3. Electromyogram (patient no. 5): right middle deltoid. Test substance: DDT, 100 ppm in oil, inhaled 6 minutes. Exercise: holding 5-lb. weight at arm's length for 30 seconds. Mental task: counting backwards from 500.

ing. The spasms caused a forward jerking flexion of the trunk at intervals of once every 3 to 30 seconds. These spasms appeared only after she became aware that any one of a variety of airborne odors was affecting her ability to think clearly and to carry planned activities to their conclusion. Spasms were triggered by exposure to airborne odors, sudden noises, or unexpected physical contact. Their frequency and intensity appeared to be related to the concentration of odor. Exposure to DDT made with the suggestion that "we wanted to check her response to a control" failed to elicit spasms. Exposure to control oil with the information "now let's check an active specimen" started contractions promptly. Distraction such as asking the patient to count backwards was effective in completely stopping a series of spasms; spasms were resumed promptly on cessation of counting. Our clinical impression is that these spasms are psychosomatic in nature and represent a conditioned response.

TABLE 3: Results of Electromyography: Average Potential Amplitude of Deltoid Muscle with Repetitive Activity

(Arrow indicates fading over time as activity continues)

Patient	Before DDT	After DDT	Recovery
	μv	μv	μv
No. 1 (Baseline) (a)	700	500	—
(Control) (b)	650	(Repeat DDT) 450	—
(Control) (c)	625	(Repeat DDT) 450	—
No. 2 (Baseline) (a)	1200	1050	2000
(Control) (b)	1500	(Repeat DDT) 1250	1800
No. 5 (Baseline) (a)	1500		
(Control) (b)	1200–1500	1200 (sluggish)	1750 → 1000 (later) 2000 → 1750
No. 6 (Control) (a)	700 → 600	(a) 100 ppm, 5 min., 600 → 500	—
(Control) (b)	700 → 600	(b) 1000 ppm, 5 min., 500 30 min. after b: 450 → 350	—

Electromyography was carried out with coaxial needles in the right middle deltoid and in the right rectus abdominis muscles. Results for the deltoid muscle are shown in tables 2 and 3. The readings from the rectus abdominis showed electrical activity indistinguishable from that of voluntary effort with electrical quiescence between spasms. Amplitude of the potentials during spasms averaged 400 μv. On voluntary abdominal contraction minimum to moderate effort elicited 200 μv and maximal contraction 900 μv.

The patient was now exposed for 8 minutes to inhalation of a control oil, the identity of which was not known to her. At 4 minutes she felt drowsy and dizzy and blinked her eyes as if to clear her vision. Potentials from the deltoid elicited by all exercises were diminished. The potentials arising from spontaneous activity of the rectus abdominis were diminished to the range of 150 to 200 μv. However, on maximal effort the rectus muscle produced 1,000 μv potentials. The patient was now exposed to DDT 0.1 mg./ml. oil held under the nostrils for 8 minutes. After 5 minutes she complained of a headache. There was a further slight decrease in potentials. The weight held at arm's length "seemed heavy." She was not able to sustain maximal effort beyond 10 to 15 seconds, and repetitive exercise was performed noticeably slower than the metronome signals. Abdominal spasms decreased steadily in amplitude during and following DDT exposure and then stopped entirely. Maximal abdominal contraction 13 minutes after DDT exposure produced only 500 μv, fading rapidly to 300 μv with continued effort. This muscle appeared to show a closer relationship to DDT exposure than did the deltoid. However, because of our inability to devise an exercise requiring reproducible mechanical work, this muscle was not tested further. Thirty-four minutes after cessation of DDT exposure, increased potentials were found on all 4 exercises for the deltoid muscle. She was reëxposed to the same concentration of DDT. Exposure was discontinued at 2½ minutes because of a rapidly developing malaise; the eyelids felt heavy, headache was intensified, the neck muscles felt tense, and she felt light-headed and unsteady. Sustained resistance elicited essentially unchanged potentials except that fading was accentuated toward the end of the 30-second period. We repeated this test and asked her to count backwards from 500 while holding the 5 lb. weight. Potentials increased and spikes appeared to be sharper as she counted. Furthermore, with counting as distraction she was able to sustain the weight for 60 seconds before reaching the same level of fatigue she experienced in 30 seconds without counting. Ten minutes after this second DDT exposure EMG results were essentially unchanged; again counting increased both physical performance and EMG potentials.

Discussion

The phenomenon of contraction of skeletal muscle is preceded by electrical changes constituting action potentials which are propagated along the length of muscle fibers. Electromyography allows us to record and to quantitate these action potentials. In the major portion of this study the stimulus to muscle contraction was provided by voluntary contraction and a work load which was specified. Of the 4 tasks used, we regard that of sustained resistance by holding a given weight at arm's length for 30 seconds as the one which most nearly calls for a reproducible amount of mechanical work on repeated trials. Repetitive activity appears to be the next most reproducible task. Maximal effort depends heavily on motivation and thus is more subject to emotional influences. Minimal to moderate effort is extremely hard to reproduce and is done to secure a record of firing of single motor units. Electrical stimulation of the ulnar nerve has been carried out and the response of the abductor digiti quinti muscle measured. While at first glance this method might seem to offer an ideal way of assuring a constant response, in practice there is the difficulty of replacing the stimulating electrode exactly over the same site on the elbow with a constant angle and compression of subcutaneous tissue. The stimulating electrode method allows us to compare successive muscle responses reasonably well with the electrode held still at any one occasion but can be considered as only a rough measure when the electrode is removed and reapplied subsequently.

The needle electrode we use samples approximately 1 cm.^{2} of muscle. Needle slippage could account for some of the variability noted in these experiments. Repetitive activity was more likely to cause such slippage than the other exercises.

By and large in our selected group of patients we have seen no abnormal firings in the muscle at rest which would indicate functional interruptions of the nerve supply to the voluntary muscles. We have observed that DDT causes diminution in electrical energy generated by voluntary contraction when baseline states and exposure to control solution are compared with exposure to DDT. In most tests subjective and EMG changes occurred simultaneously after about 6 minutes of infranasal exposure. Recovery to near baseline levels then was observed in 30 to 60 minutes following withdrawal of the airborne stimulus. However, twice we have observed a delay in EMG response. In this series patient no. 6 did not show maximum EMG changes for 40 or 50 minutes after exposure although muscle strength and coördination appeared to be affected within 5 minutes of each of her exposures. Our failure to demonstrate a stepwise diminution in potentials in response to a strain of muscle stimuli indicates that the site of muscle cell inhibition lies central to the motor end-plate.

In the course of these and related experiments we have occasionally observed a sharp, transient increase in EMG potentials immediately prior to abrupt decrease below baseline levels. We suspect, therefore, that DDT elicits a biphasic response, first having the effect of stimulation, then depression of muscle activity. Further investigation by monitoring of activity continuously from onset of DDT exposure is called for. To date only intermittent exercises have been carried out. Changes in perception, mentation, slowing of motor activities, blurring of vision, loss of balance, and suppression of a psychosomatically-conditioned response all suggest that the primary target of DDT in these subjects is the central nervous system and leads us to surmise that stimulation of motor inhibitory cells either in the cerebral cortex or at some site in their descending tracts is the probable explanation for the inhibition of muscle-cell firing.

Patient no. 5 demonstrates depression of EMG potentials from psychic stress to such a degree that EMG depression from DDT cannot readily be demonstrated. Decreased tolerance for sustained activity, slowed performance, incoördination and rapidly fading potentials are the only findings in the deltoid muscle related to DDT exposure which did not occur as part of her response to control oil. It is of some interest that psychic stress of an intellectually undemanding nature (odors, sound, startle reflexes) on the one hand initiates spasms of the rectus abdominis and on the other hand the psychic stress either of a control challenge or of doing mental work (each asking her to produce a correct answer) diminishes the spasms. We assume that different cerebral areas are activated by these 2 types of psychic stress. The real physiologic stress of DDT exposure inhibits these spasms apparently in the same manner as it inhibits voluntary muscle contraction. From this arises the conjecture that DDT might act on the same cerebral areas which are involved in mental work, since both factors inhibit the spasms.

When the added psychic stress of counting backward is superimposed on the muscle already inhibited as a result of DDT exposure, the effect is enhancement of muscular power and electrical activity. One wonders if the mechanism here is analogous to reinforcement of the spinal reflex by an unrelated purposeful muscular activity.

At this point it becomes important to distinguish between psychic depression of EMG potentials and DDT depression. This has been done by the use of test and control solutions which were identical in appearance and odor, presenting these as unknown entities to the subjects. In this series of 6 sensitive subjects, 5 revealed clear-cut inhibition of EMG potentials on exposure to DDT with differentiation between test and control challenges. In the initial experiment the ability to inhibit EMG potentials at will and demonstrate recovery and reinduction by test but not by control presentations constitutes good evidence that DDT is capable of eliciting the changes noted, independently of psychic factors. In this connection we would note that both anxiety states and exacerbations of schizophrenia have been studied by others[7, 8, 9] with respect to EMG changes. In both conditions muscle potentials have been found to be increased, not decreased.

DDT in acutely poisoned rats increases electrical discharges both in muscle cells and in peripheral nerves.[10] The result is a myotonia which is completely unlike the myasthenia in our patients. The EMG effects of extremely small doses of DDT have not to our knowledge been investigated. In animal experiments the classic, acute, fatal doses are far higher than any used here—the intravenous LD_{50} for the monkey is 50–60 mg. Kg.[11] But behavioral experiments now are pointing out that cerebral effects occur at much smaller dose levels: feeding levels of 20 ppm for bobwhite and quail produce impairment in learning in 8 weeks or less. (No tests were made at a shorter interval.[12]) Even in these terms and allowing for the fact that any absorption through the nasal mucosa will be carried directly to the brain, the doses used for our experiments are still very low. The smallest effective doses used here must be in the realm of a relatively few molecules.

This dose range of toxicity is so low as to suggest that something has happened to our patients rendering them unable to handle these minute doses. The persons chosen for this study were selected because of their extreme sensitivity which was discovered as their chronic illnesses were studied. The multiplicity and variety of additives to food, air and water, each of which sets off essentially the same set of symptoms in these persons, suggest that these persons have become toxicologically decompensated. The trigger substances include fumes from gas stoves, automobile exhaust, raw gasoline, plastics, perfumes, turpentine, kerosene, DDT, ammonia, and chlorine. The feature in common would appear to be capacity to react with or dissolve in fat. We know that lipid membranes in the interior of all cells separate and regulate the functions of organelles in the interior of all cells in the body. One organelle which contains highly acidic enzymes, the lysosome, is known to be disrupted not only by many toxic and hormonal stimuli but also by antigen-antibody complexes and by hydrocarbon carcinogens.[13, 14] This then may well be the weakened link.

Almost all of the approximately 50 "chemical reactors" seen by one of the authors in the last 3 years show also multiple food, drug and/or pollen allergies. One patient is allergic only to foods such as additive-free egg, and, although her symptoms and EMG response to egg are identical to those of other subjects, she is not sensitive to DDT, perfume, etc. Whether the allergic state is truly a factor in predisposition to toxic illness is unknown. About all we can say of the incidence of this kind of illness expressed clinically as fatigue, weakness, and mental slowing is that it is certainly not a rarity.

Summary

The EMG effect of minute amounts of DDT administered to humans by the infranasal route has been studied. Exposure to concentrations of 1,000, 100 and 10 ppm in highly sensitive patients inhibited the amplitude of EMG potentials within a few minutes. Recovery could be demonstrated at about 20 minutes after removal of the stimulus. Evidence is presented that the site of DDT action is central to the myoneural junction and probably affects the more highly organized cerebral structures. Whether the extreme sensitivity observed is the result of an allergic mechanism or toxicologic decompensation is unknown. Electromyography is a method of objective measurement of fatigue induced by this form of allergic or toxic stress.

The authors thank Dr. Hazel Swann, Cardiovascular Research Laboratory, Freedmen's Hospital, for the electrocardiographic study. The authors also thank Dr. J. Wayland Hayes, Jr., of the U. S. Public Health Service for the crystalline DDT used in this study.

(Continued on page 296)

Office Diagnosis of Respiratory-tract Bacterial Infections*†

CAPTAIN A. M. MARGILETH, MC, USN‡, AND LT. COMMANDER G. W. MELLA, MC, USN§

Respiratory illnesses are the leading cause for visits to the doctor. Children usually have respiratory illness (5 to 7 per year) more frequently than do adults (4 to 5 per year).[1] In the acutely ill patient at any age the physician is faced with the difficult decision of whether or not to prescribe an antibiotic. Occasionally the educated parent or patient may question the need for penicillin. When an antibiotic is prescribed it is given with some reluctance, since the etiology of the infection has not been established. A simple bacterial culture will help avoid this dilemma.

Because a myriad of therapeutic agents are now available and the need to minimize and prevent adverse drug reactions is increasing, emphasis is being placed on development of practical laboratory aids[2] to enable the clinician to diagnose specifically each infection and to treat appropriately each patient's illness.

Clinical diagnosis of acute respiratory disease is not difficult in the majority of patients. Ninety-five per cent of common respiratory infections are caused by viruses.[1, 3] Careful examination of the eyes, ears, nose, mouth, and oropharynx often will indicate a viral etiology. Five per cent or less of upper respiratory tract infections are bacterial in origin.[1, 2] Practically, the clinician is concerned mainly with streptococci, infrequently with *H. influenzae,* and rarely with diphtheria. Other pyogenic bacteria (pneumococci, staphylococci, gram-negative organisms) rarely, if ever, cause pharyngitis.[4, 5] A culture of specimens from the nose, nasopharynx, throat, or all 3 usually will show common flora,[6] and if cultures are taken routinely from the patient with respiratory disease the clinician will be able to make an accurate bacteriologic diagnosis in sufficient time to treat streptococcal disease intelligently.[5]

It is our purpose herein to report our experiences during 1965 with a clinical classification of pharyngitis which was correlated with practical laboratory procedures performed daily in the outpatient department of the U.S. Naval Hospital, Bethesda, Maryland. By using these simplified methods[7] to differentiate viral and bacterial illnesses the practicing physician should be able to diagnose and treat respiratory infections in ambulatory patients with confidence. These procedures have enhanced the education of the physician, the patient or parents, or both alike, and their use has stimulated further studies in this important area of daily practice.

Methods and Materials

Some of the procedures which are still in use have been discussed previously.[7, 8] The patients' ages ranged from early infancy to 18 years, with the majority between 1 and 8 years. A single throat specimen was taken on a cotton swab from each child with a respiratory illness. This was rotated directly upon a small area of a human blood-agar plate. The swab was refrigerated 24 to 48 hours in a small quantity (less than 1 ml.) of nutrient broth pending the report of the culture. If beta hemolytic streptococci were found, confirmation as to group was performed with fluorescent antibody techniques. Within 3 hours all blood agar plates were streaked with a wire loop, and 2 short 2 to 3 mm. stabs were made in the agar to enhance subsurface hemolysis of the red blood cells by oxygen labile streptolysin O. This method greatly facilitated the reading of beta hemolysis and also readily differentiated alpha hemolysis. Plates were incubated at 37 C for 24 to 48 hours. These were read each morning with transmitted and reflected fluorescent lighting and a hand magnifying lens. Gram stains were rarely necessary since subcultures were done on suspected colonies of beta streptococci with a Taxos A disc* (bacitracin disc 0.2 units) or a Taxos P disc* to differentiate alpha hemolytic streptococcus from pneumococcus. Plates showing a predominate growth of staphylococci, EAK bacteria (*E. coli, A. aerogenes* and Klebsiella), or other gram-negative organisms were sent to the main laboratory for further identification in special instances, particularly if the specimen was taken from the eye, nose or ear. The number of colonies of beta streptococci were tabulated. Complete blood counts, a sedimentation rate, A.S.O. titer, heterophil and a P.P.D. or histoplasmin skin test were done in selected cases. Nasopharyngeal cultures with cotton-tipped aluminum wires† were done in children with otitis media, cervical adenitis or those with a respiratory tract infection whose throat was normal. Viral cultures were not performed.

---

* Presented in part at the Annual Scientific Assembly of the Medical Society of the District of Columbia, held in Washington, D. C., November 23, 1965.

† The opinions or assertions contained herein are the private ones of the writers and are not to be construed as official nor as reflecting the view of the Bureau of Medicine and Surgery of the Navy Department or the Naval Service at large.

‡ Chief, Pediatric Service, United States Naval Hospital, National Naval Medical Center, Bethesda, Md. 20014.

§ Chief, Pediatric Outpatient Department, United States Naval Hospital.

In order to standardize our diagnoses and give some direction to further tests and therapy patients were identified according to an A, B, C classification of the appearance of the throat (table 1). If the only diagnosis was otitis media or acute rhinitis or bronchitis this A, B, C clinical classification was not used. In the group having a normal pharynx (D) or mild pharyngitis (C), antibiotics were always withheld for 48 hours until the final bacteriologic report was known. In those children with moderate pharyngitis (B) or severe pharyngitis (A) therapy was withheld except when the child was acutely ill systemically or had been ill for more than 7 days. This offered the advantage of a return telephone call to determine the results of symptomatic therapy: fluids, antipyretics, decongestants, and antihistamine drugs as indicated. In patients from whom a positive group A beta streptococcus was recovered all family contacts had a throat culture made at the time penicillin therapy was administered to the patient.

TABLE 1: Clinical Classification of Acute Pharyngitis

Type of Throat	Signs
A—Severe	Erythema, edema and/or exudate, and tender cervical lymph nodes
B—Moderate	Erythema, edema and/or exudate without tender cervical lymph nodes
C—Mild	Erythema only
D—Normal	None but other respiratory symptoms or signs

Results

Bacterial cultures during 1965 (approximately 9,973 cultures of the eye, ear, nose and throat, urine, or skin) were studied. Eighty per cent (7,988) were nose and throat cultures. Of the latter group, 1,285 (16 per cent) were positive for beta hemolytic streptococci and only 508 or 6.4 per cent were group A (figure 1). A greater number of non-group A streptococci[2] were recovered during the summer and fall months when the incidence of beta hemolytic streptococci was low.

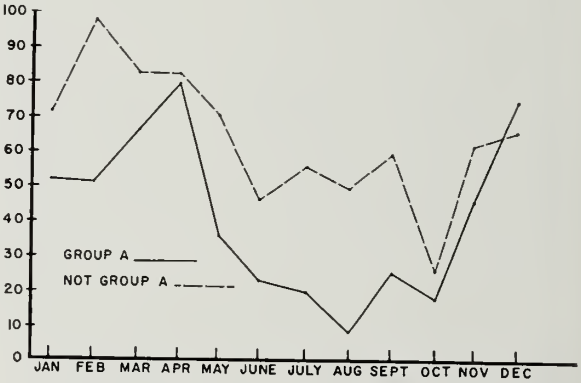


FIG. 1. Comparison of group A to not group A beta hemolytic streptococcus in A,B,C,D pharyngitis, January through December 1965.

Figure 2 shows the correlation and higher incidence (per cent) of group A streptococci found in severe or moderate pharyngitis[7] (class A and B) compared with a low incidence in mild pharyngitis (class C) or in throats appearing to be normal (class D—control) during the calendar year 1965.

Figure 3 depicts the monthly incidence of group A beta hemolytic streptococci cultured from contacts in the family and the number of specimens from the total contacts cultured. It will be noted that fewer group A streptococci were cultured during the summer and early fall months, whereas in the winter and spring about 8 per cent of the contacts were found to carry group A streptococci in significant numbers, i.e., over 5 to 10 colonies per plate.

---

* Taxos A and P discs, from the Baltimore Biological Laboratories, Baltimore, Md.

† Colab, from the Consolidated Laboratories, Inc., Chicago, Ill.

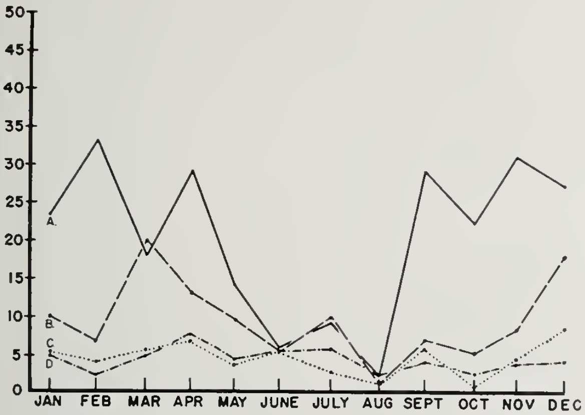


FIG. 2. Monthly incidence (per cent) of group A beta hemolytic streptococcus found in 3 types (A,B,C) pharyngitis and normal throats (D), January through December 1965.

From our studies of the children with severe (A) pharyngitis we have found that in the majority of cultures there were over 25 to 30 colonies of group A streptococci per plate, whereas cultures from the asymptomatic family contacts showed less than 5 to 10 colonies.

The ASO titer, heterophil antibody and skin tests, although very helpful in reaching a definitive diagnosis, did not aid in an immediate decision for specific therapy. Originally we felt that the blood count or direct smear might be helpful to decide promptly the need for antibiotic therapy; however, they are often of no value, particularly the direct pharyngeal smear. Total leukocyte and differential counts were helpful when the values were normal, since bacterial infections, especially streptococcal, usually produce a leukocytosis.[9] Nevertheless, a white blood cell count over 15,000 or a shift to the left, or both in the differential count may occur in acute viral infections. At present, immunofluorescent studies are being used to confirm the grouping of streptococci, but they are too technical and costly for office diagnosis.

Comments

The mechanisms of microbial pathogenicity and of host resistance[10] should be reviewed from time to time in order to remind the physician of the many factors which determine the severity and outcome of bacterial infection in different patients. Protective antibodies produced by streptolysin O and exotoxin elaborated by group A hemolytic streptococci ought not be prevented by premature administration of an antibiotic.[11] This may allow the same bacteria to invade the host later.

The basic principles of anti-infective therapy must be adhered to with greater care than before, particularly since increasing numbers

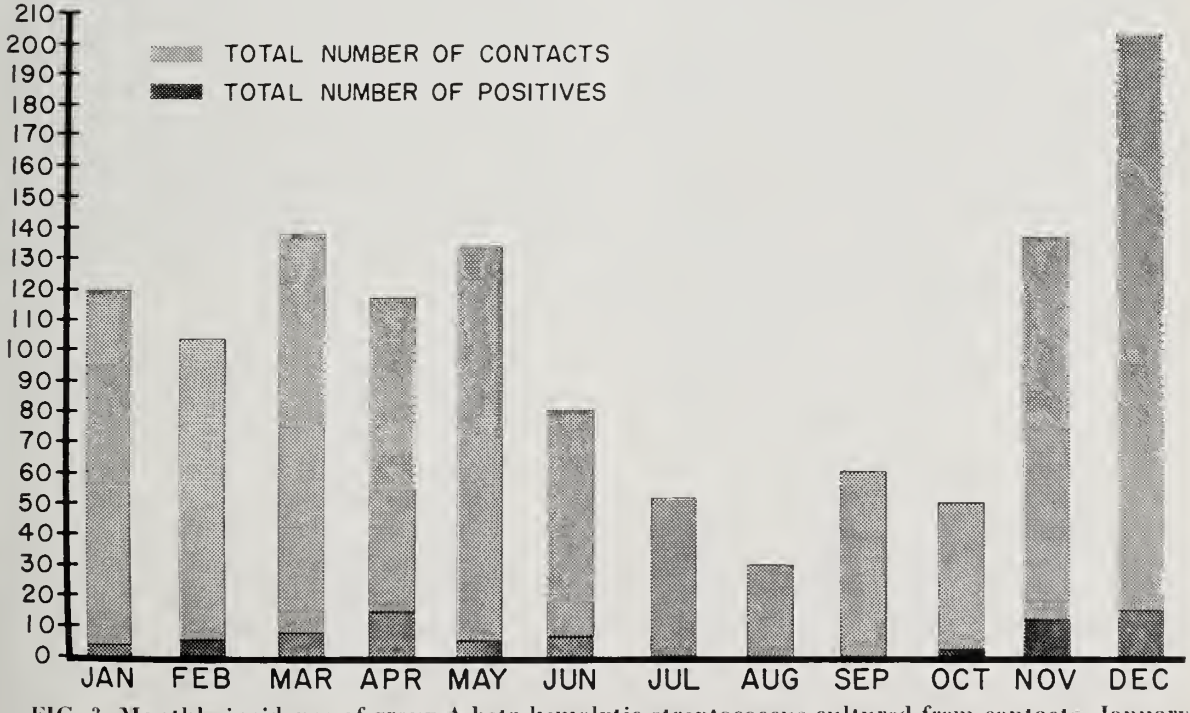


FIG. 3. Monthly incidence of group A beta hemolytic streptococcus cultured from contacts, January through December 1965.

of antimicrobial agents become available to physicians each year. Pulaski[10] has stated these principles: (1) specific clinical and etiologic diagnosis, (2) prompt institution of appropriate supportive measures, and (3) specific antimicrobial therapy.

The clinically important human microflora number over 2 dozen different bacteria. These are potential pathogens for the epidermal and mucosal surfaces of the body. About 10 are present as normal flora of the mouth and pharynx. Practically, group A beta hemolytic streptococci are the only major pathogenic organisms producing bacterial pharyngitis. The physician becomes aware of the epidemiology of upper respiratory tract infections in his practice by making a throat culture in all patients with oropharyngitis. When normal flora are found in the throat unnecessary antibiotics can be withheld; positive cultures for group A hemolytic streptococci in a series of patients will alert the clinician to an outbreak of streptococcal pharyngitis and direct specific antibiotic therapy. Nonstreptococcal exudative pharyngitis is found frequently in infectious mononucleosis or with adenovirus or Coxsackie infections.[3, 5, 12] Another benefit of routine throat cultures is to alert the clinicians in the community to the onset of a streptococcal epidemic. These can be detected on the blood plate by a change in the colonial form from a glossy to a matt or to a mucoid form of hemolytic streptococci.[8]

Other tests, such as the total leukocyte count, differential blood count, direct smears of pharyngeal exudate, or determination of ASO titers were performed infrequently because of their limitations in helping to make an immediate decision of specific therapy and other reasons aforementioned. In instances of technical error, overgrowth of common flora, lack of growth of bacteria, or inconsistency between the clinical and bacteriologic findings a second throat or nasopharyngeal culture, or both, must be repeated a day or 2 later. It is emphasized that the element of time during the course of an illness at which a culture is taken is important.[11]

The cost of doing bacterial cultures in the office ranges from 1 to 2 dollars per patient. This includes swabs, agar plates, sterilization, and Taxos A discs. Broth tubes are not necessary, since greater numbers of streptococci can be recovered by directly swabbing the plate or placing the dry swab in a medicine envelope until returning to the office from a house call.[13]

Introduction of a systematic nomenclature for classifying acute pharyngitis (table 1) has continued to facilitate the clinical diagnosis based upon recovery of streptococci for each child with pharyngitis or an upper respiratory infection.[7] Figure 2 shows that patients with severe (A) pharyngitis had the highest incidence (33 per cent) of group A streptococci. The patients with moderate (B) and mild (C) pharyngitis showed fewer streptococci, i.e., 20 and 8 per cent, respectively. As expected, the highest recovery rate occurred during the winter and spring months. The patients with normal (D) throats produced the lowest incidence; however, the recovery rate in this group was still 2 per cent. Many of these children had bronchitis or otitis media as the primary diagnosis.

During the past 8 years we have seen no ill effects from delayed antibiotic therapy.[5, 14] In fact, there is some benefit (higher rise in antibody titers) from a time-lag between the onset of a streptococcal illness and initiation of penicillin therapy.[11]

Respiratory-tract infections in the infant are more frequent and last longer than in the older child. In order to prevent further morbidity by overtreatment or inappropriate therapy at any age the physician must utilize simple bacteriologic methods to make a specific etiologic bacterial diagnosis, or conversely, if the culture is normal flora, be reassured that symptomatic therapy is all that is needed. Promiscuous use of expensive antibiotics will not only create a false sense of security on the part of the physician and patient or parent when the child gets well (which can occur in 48 to 72 hours with or without antibiotics) but, if broad-spectrum antibiotics are used frequently, acquisition of potentially dangerous strains of bacteria may occur, or permanent nontoxic side-effects, e.g., discolored teeth, may follow.

The use of benzathine penicillin G (Bicillin®) is the surest, simplest, and least expensive method of treating streptococcal respiratory-tract infections. A single injection of 600,000 units for a child under 60 pounds and 1.2 million units for a child of 60 or more pounds is the only treatment necessary. Oral penicillin is effective but there is almost a 50 per cent failure rate to complete 10 days of oral therapy, especially when the patient is manifestly well by the third day. Duration of adequate penicillin blood levels is most important to eradicate the hemolytic streptococci in order to prevent nonsuppurative complications. High doses of penicillin are not ordinarily required.[5, 14] If the patient is penicillin-sensitive, erythromycin or triacetyloleandomycin by mouth will be necessary for 10 days. Since there is a 5 to 20 per cent rate of failure with these antibiotics a follow-up culture must be done 4 to 5 days after discontinuance of these antibiotics.

In our studies[7] 8 to 14 per cent of the family contacts have had group A beta hemolytic streptococci recovered from their throats. Most of these contacts were asymptomatic. Other studies have reported a recovery rate of 25 per cent.[14] The majority of our contact cases had fewer than 5 to 10 colonies per plate. In nearly all cases we advised Bicillin therapy even though asymptomatic carriers (less than 5 colonies) probably do not require treatment.[14] We have not had a problem with recurrent attacks or "failures" of therapy in our patients.

Reactions to Bicillin have been minimal and only local with approximately 6 exceptions in our 8-year study. About ⅓ of the children have had local transient pain in the thighs for 1 or 2 days. Three or 4 systemic reactions were of the delayed serum-sickness type and occurred 4 or more days after inoculation, whereas 2 were accelerated with urticaria and an erythema multiforme type of rash which responded to antihistamines and epinephrine. No serious systemic reactions occurred. This is verified by other reports[5, 9, 14] and in 400,000 naval recruits.[8]

Antibiotics should not be used in the primary management of acute viral respiratory disease.[15] The cost of a culture is minimal compared with the value received in interest, education of the parent (or patient) and physician, and satisfaction of providing total patient care. As recently as 7 years ago our parents frequently requested a penicillin injection for their children when they had respiratory infections; today they request a throat culture instead of an antibiotic.

Summary

Clinical methods and results of performing office bacteriology in the diagnosis of respiratory tract bacterial infections have been discussed. The results of throat cultures have been used as a guide for specific antimicrobial therapy. With these methods we have stimulated physician interest in respiratory-tract infections, especially streptococcal, and have provided guidelines for appropriate therapy for treatment of some of the most common illnesses seen in medical practice. In the interest of improving the care of patients and in preventing unnecessary use of antibiotics we advocate the routine use of office bacteriology as a guide in the management of respiratory-tract disease.

Acknowledgment is made to Mrs. Kay F. Burnett for typing the manuscript and to Miss Frances H. Atkinson for technical editing.

References

1. Dingle, J. H., Badger, G. F., and Jordan, W. S., Jr.: Illness in the Home. Cleveland: Press Western Reserve Univ., 1964, pp. 19–129.
2. Margileth, A. M.: Laboratory diagnosis of respiratory diseases in infancy. Proc. Meeting Association of Clinical Scientists, held in Washington, D.C., November 12–14, 1965, in press.
3. Chanock, R. M., and Parrott, R. H.: Pediatrics, 1965, **36**, 21.
4. Mortimer, E. A., Jr., and Boxerbaum, B.: Ibid., 1965, **36**, 930.
5. Stollerman, G. H.: J.A.M.A., 1964, **189**, 145.
6. Box, Q. T., Cleveland, R. T., and Willard, C. Y.: Amer. J. Dis. Child., 1961, **102**, 293.
7. Mella, G. W., and Margileth, A. M.: Med. Ann. D. C., 1964, **33**, 487.
8. Frank, P. F., Stollerman, G. H., and Miller, L. F.: J.A.M.A., 1965, **193**, 119.
9. Breese, B. B., Disney, F. A., and Talpey, W. B.: Amer. J. Dis. Child., 1965, **110**, 125.
10. Pulaski, E. J.: Common Bacterial Infections. Pathophysiology and Clinical Management. Philadelphia: Saunders, 1964.
11. Moffett, H. L., Cramblett, H. G., and Black, J. P.: Pediatrics, 1964, **33**, 5.
12. Garrow, D. H.: Brit. Med. J., 1965, **1**, 297.
13. Breese, B. B.: Pediatrics, 1965, **36**, 599.
14. Wannamaker, L. W., in Gellis, S. S., and Kagan, B. M., edited by: Current Pediatric Therapy. Philadelphia: Saunders, 1966, pp. 650–5.
15. Davis, S. D., and Wedgewood, R. J.: Amer. J. Dis. Child., 1965, **109**, 544.

Clinical Experience with Streak-plate Urine Cultures*†

LT. COMMANDER G. W. MELLA, MC, USN‡, AND CAPTAIN A. M. MARGILETH, MC, USN§

THE MEDICAL PRACTITIONER during the past decade has been made increasingly aware of the importance of genitourinary infections in children. It is a rare physician, indeed, who will prescribe a short course of "sulfa therapy over the phone" for the patient with fever and dysuria. Autopsy and clinical studies[1, 2] have shown that urinary-tract disease may be insidious and reveal either no symptoms or those that point to other organ systems such as the gastrointestinal tract.[3]

The urologist, with his surgical discipline, demands a thorough and comprehensive evaluation of all patients with genitourinary infection[4] due to the serious potential of renal disease. If this be the case the burden is on the generalist and pediatrician to document the infection accurately in order to refer only those patients who require further urologic studies. In our experience errors commonly made involve either under- or overdiagnosis. It is generally true that the physician who so carefully evaluates a child's speech and gait will surrender examination of the urine to a technician who may have the least experience in the laboratory.

Underdiagnosis may occur when symptoms happen that are not related to the urinary tract, such as vomiting or diarrhea, or those that are nonspecific, such as fever.[3] Many a child with chronic pyelonephritis or hydronephrosis has a past history of repeated episodes of "influenza." Overdiagnosis, on the other hand, is becoming more common. The child with fever, urgency, and dysuria may have pyuria without bacteriuria and be started on an antimicrobial drug for a period of from 6 weeks to 3 months. This patient may then be referred unnecessarily for extensive diagnostic studies that are not without pain and morbidity.

We believe that the best answer to the problem is to have a simple means to examine thoroughly all urines in the physician's office. For the past 3 years we have used a small laboratory in our outpatient department to examine urines, do gram stains, and make cultures by the colony count method.[5] The clean-catch urine is easy to obtain and does not subject the patient to fear or to pain.

Materials and Methods

For most urine collections we used the clean-catch method. If the patient was toilet-trained and would void on demand the midstream specimen was obtained. This was done with the aid of our clinic nurse or doctor, or one of the parents. The female was placed on the toilet in a sitting position with her legs spread. The vagina was held open by the assistant, and the labia minora were then sponged with a single wipe in a downward direction with 3 cotton balls saturated with liquid pHisoHex® followed by 3 cotton balls saturated with water. The child was requested then to void while the labia were held open, and when the flow reached its peak, or after a few milliliters of urine were passed, a sterile, wide-mouthed plastic cup‖ was introduced into the stream and the remainder collected.

Generally, males old enough to void on demand were not cleaned, but the foreskin was retracted enough to expose the meatus, and again when the flow reached its peak, or a few milliliters of urine were passed, the remainder of the bladder urine was collected in the sterile plastic cup.

---

* Presented in part at a meeting of the Association of Clinical Scientists in Washington, D.C., November 14, 1965.

† The opinions or assertions contained herein are the private ones of the writers and are not to be construed as official nor as reflecting the view of the Bureau of Medicine and Surgery of the Navy Department or the Naval Service at large.

‡ Chief, Pediatric Outpatient Department, United States Naval Hospital, National Naval Medical Center, Bethesda, Md. 20014.

§ Chief, Pediatric Service, United States Naval Hospital.

‖ Falcon disposable sterile container, a product of the Falcon Plastics Division of B-D Laboratories, Inc., Los Angeles 45, Calif.

In infants too young to void on demand the perineum was cleansed with pHisoHex and water and a plastic urine collector[*] was affixed. The diaper was put on then, and the mother or an attendant checked the bag every 15 minutes until a sample was obtained. If the baby had a stool during the waiting period the bag was removed and the area recleaned and a new bag affixed. Urine from the bag collected in this way was immediately poured into the sterile plastic cup.

The plastic cups from both methods of collection were taken directly to our laboratory and placed in the refrigerator until the time that a culture could be made. In the laboratory a platinum loop[†] calibrated to deliver 0.01 ml. (figure 1) was flamed and used to mix the urine thoroughly. The 0.01 ml. drop of urine was then placed in the center of a blood agar plate and, without reflaming, the loop was spread evenly over the entire surface of the plate. Agar plates were incubated at 37° C and examined at 24 and 48 hours. A drop of unspun urine was removed for gram stain (1 loopful). The original samples of urine were kept in the sealed sterile plastic cups, labeled and stored in the refrigerator at 42° F for further study as needed.

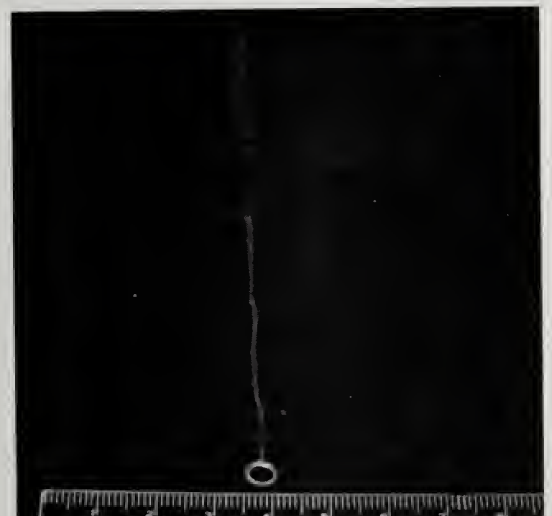

CENTIMETERS
Headquarters for Laboratory
FISHER SCIENTIFIC
INCHES
Pittsburgh • New York • Washington • Chicag

FIG. 1. Platinum wire loop calibrated to 0.01 ml.

Microscopic analysis was done with 1.0 ml. of urine, centrifuged at 3,000 rpm for 3 minutes and the supernatant poured off, then the sediment tapped onto a slide and a coverslip placed on top. Specific gravity required only a drop of urine when analyzed on the T-S meter[‡] (figure 2). Protein and sugar and pH were done on paper sticks[§]. Further special studies were carried out as the clinical situation required.

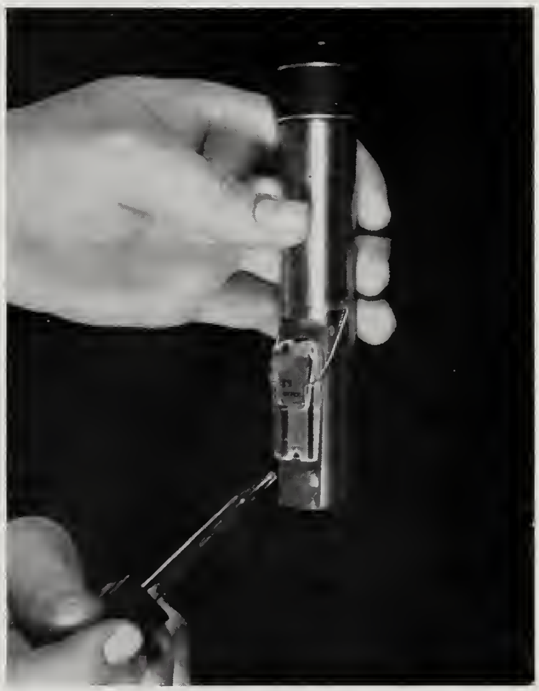


FIG. 2. T-S Meter used for urine specific gravity.

The blood agar plates streaked with 0.01 ml. of urine were examined by us in the OPD laboratory at 24 hours. Colony counts were done visually, and up to 300 colonies could be counted accurately if the plate was divided into 4 equal quadrants with a wax pencil. The number of colonies counted multiplied by 100 gave the total number of colonies of bacteria per ml. of urine. If there was no growth on the plate or an insignificant colony count (less than 10), the plates were reincubated and reëxamined at 48 hours.

If the colonies on the streak plate were too numerous to count the original sample in the plastic cup was removed from the refrigerator and transported to the main bacteriology laboratory where a dilution of 1:10 was made with normal saline, and 0.01 ml. of this was streaked on another blood agar plate as well as mannitol and MacConkey plates. Another colony count was done on this dilute sample. Accurate colony counts could be done up to and beyond 100,000 bacteria per ml. Sensitivity of the bacteria recovered was determined with 8 antibiotic discs on all colony counts above 10,000 per ml.

---

[*] Sterilon, a pediatric urine collector (P.U.C. 10), produced by Sterilon Corp., Buffalo 11, N.Y.

[†] Calibrated Loop No. 7433-A, a product of Arthur H. Thomas Co., Philadelphia 5, Pa.

[‡] T-S Meter, a product of the American Optical Company, Instrument Div., Buffalo 15, N.Y.

[§] Combistix, produced by Ames Co., Inc., Elkhart, Ind.

Results

Table 1 is a résumé of our experience with streak-plate cultures from June 1, 1964 to May 31, 1965. An average of 68 per cent (range 57–86 per cent) of all cultures revealed either no growth or less than 1,000 (10^3) colonies of bacteria per ml. These cultures and the original samples could then be discarded after 48 hours. An average of 8 per cent (range 2–16 per cent) of all cultures had more than 100,000 (10^5) colonies per ml., and this is the number of bacteria that is generally considered to imply infection.[6, 7, 8]

TABLE 1: Bacterial Colony Counts per Milliliter on Clean-catch Urines from June 1964 through May 1965

Month	No Growth or 1,000 Colonies		10^3 to 10^5 Colonies		10^5 Colonies		Total
	No.	Per cent	No.	Per cent	No.	Per cent	
June	15	60	7	28	3	12	25
July	36	66	10	18	9	16	55
August	34	60	18	32	5	9	57
September	21	57	12	32	4	11	37
October	36	78	8	17	2	4	46
November	46	66	19	27	5	7	70
December	63	74	18	21	4	5	85
January	64	70	21	23	6	7	91
February	85	86	12	12	2	2	99
March	69	68	28	27	5	5	102
April	51	68	16	21	8	11	75
May	92	81	20	18	2	2	114

Various investigators[7, 9] have reported an incidence of 10^4–10^5 colonies per ml. in less than 5 per cent of all urine cultures. During the year reported we averaged 5 per cent in the 10^4–10^5 range (table 2). It must be emphasized that this is a clinical survey and not a research project, and, therefore, uniform collections were not always obtained. Sometimes rather inexperienced personnel assisted in the urine collections.

TABLE 2: Colony Counts of 10^4 to 10^5 Bacteria per Milliliter of Urine from June 1964 through May 1965

Month	No.	Per cent	Total
June	1	4	25
July	3	6	55
August	12	22	57
September	2	5	37
October	0	0	46
November	5	7	70
December	1	1	85
January	3	3	91
February	1	1	99
March	7	7	102
April	5	7	75
May	2	2	114
Average		5	

Bacterial counts of 10^3–10^4 per ml. of urine averaged 18 per cent of all the urines cultured during the year observed (table 3). We have used the range of 1,000 (10^3) to 100,000 (10^5) colonies of bacteria per ml. as "indefinite." During the year observed, an average of 23 per cent (range 12–32 per cent) of the cultures fell into this group. Since approximately 18 per cent of these were between 1,000 and 10,000 colonies per ml. (10 to 100 colonies on the plate), they could be counted very accurately (figure 3) and the plates and original samples also discarded.

TABLE 3: Colony Counts of 10^3 to 10^4 Bacteria per Milliliter of Urine from June 1964 through May 1965

Month	No.	Per cent	Total
June	6	24	25
July	7	13	55
August	6	11	57
September	10	27	37
October	8	17	46
November	14	20	70
December	17	20	85
January	18	20	91
February	11	11	99
March	21	21	102
April	11	15	75
May	18	16	114
Average		18	

All of the "positive" cultures (10^5 and over) and some of the "indefinite" ones (10^4–10^5) were sent to the main bacteriology laboratory along with the original samples. Occasionally lesser counts were forwarded when we were not sure of the organism or sensitivity tests were desired. In general, therefore, about 80–85 per cent of the urine cultures were examined and decided upon in our OPD laboratory with no further study required.

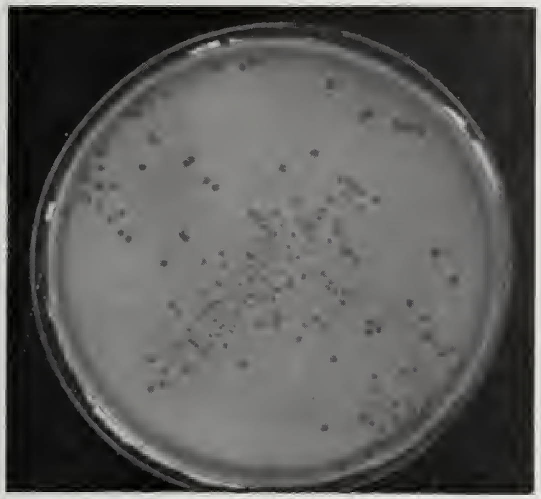


FIG. 3. Streak plate with 256 colonies of E. coli.

Discussion

It is not the scope of this report to discuss the pathogenesis of genitourinary infection, since there are many good reviews.[10] There is, however, a trend in pediatrics toward the complete urologic evaluation of a patient with a first infection. For this reason it is extremely important for the medical practitioner who cares for children to have a simple and inexpensive but reliable means to help establish a firm diagnosis. Kunin[11] in a study of 3,057 school children demonstrated amply that there is such an entity as asymptomatic bacteriuria in children. In dealing with large groups of patients it is impractical to suggest that a physician examine a fresh urine from each to look for the presence of bacteria and pus cells. Randolph and Greenfield[12] have recently described a "urine diary" that may in time demonstrate that these cases of bacteriuria are not really without symptoms if one obtains a careful history. At any rate there is no doubt that urinary-tract disease in children may be insidious and may cause only symptoms apparently unrelated to the genitourinary system; and, if cultures are not obtained on a great many infants and small children, severe disease may gain a foothold and cause irreparable disease in later years.

A most common clinical problem, on the other hand, is overenthusiasm by the inexperienced physician in the diagnosis of infection of the urinary tract. There is a tendency to commence therapy prematurely in a febrile child with symptoms of dysuria or an infant with fever and pyuria. The finding of white blood cells in the urine is not an adequate criterion for the diagnosis of urinary infection. There are many causes of pyuria.[13] Unless white blood cells are carefully quantitated[14] by a competent examiner and a bacterial colony count is done the physician cannot properly make a correct diagnosis of urinary-tract infection because of the presence of white blood cells in the urine sediment. Certainly a child should not receive a course of antibiotic therapy and perhaps extensive urologic investigation without proper documentation of significant bacteriuria. While awaiting the urine cultures we prescribe fluids, sitz baths, and Pyridium® to alleviate dysuria and urgency.

Although Pryles[15] reported a good correlation between 2 gram stains and "positive" urine cultures, Hoeprich[16] found that the gram stain may also diagnose infection when it is not really present. It therefore seems logical to assume that there is no single "test" for the diagnosis of urinary-tract infection, but that a judicious combination of tests should be performed before a patient is labeled as being infected. If urine cultures can be done easily and inexpensively, perhaps more will be done and errors of under- and overdiagnosis can be decreased.

A most important consideration is the "indefinite" culture. Since physicians have traded the catheter for the clean-catch urine in order to screen large numbers of patients, there has been some confusion regarding the significant number of bacteria in the urine. Table 4 is a review of the charts of outpatients who had cultures yielding 1,000 to 100,000 bacteria per ml. The patients in this list were followed in our clinic from 1 to 19 months after the original culture, and it was ascertained both from a clinical and bacteriologic viewpoint that no real conclusion could be drawn from a single clean-catch urine that fell in the doubtful range of 10^3 to 10^5 colonies per ml. For practical purposes such urine cultures must be repeated. This is not as difficult as it seems, however, because only 1 out of 4 colony counts will fall in this range and we can significantly reduce that doubtful number with a second clean-catch urine. If there is further doubt, catheterization or suprapubic needle aspiration of the bladder

TABLE 4: Follow-up of Indefinite (10^3 to 10^5 Colony Counts per Milliliter) Urine Cultures from June 1964 through May 1965

MONTH	Total Indefinite Cultures	Follow-up Clinical Status							
		Lost to Follow-up		Infected		Not Infected		Still Indefinite	
		No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
June	7	4	57	0	0	2	29	1	14
July	10	2	20	1	10	3	30	4	40
August	18	3	17	1	6	1	6	13	72
September	12	3	25	1	8	4	33	4	33
October	8	3	38	1	13	2	25	2	25
November	19	2	11	4	21	5	26	8	42
December	18	7	39	4	22	4	22	3	17
January	21	7	33	3	15	5	24	6	29
February	12	0	0	1	8	2	17	9	75
March	28	0	0	4	14	7	25	17	61
April	16	0	0	1	6	3	19	12	75
May	20	0	0	2	10	2	10	16	80

can be performed.[17] We have found the latter procedure very easy to perform in a few minutes' time, and without complications or injury to the infant. It is reassuring to us that such a simple procedure as collecting a "clean-catch" urine and performing a colony count can resolve our diagnoses with a good degree of accuracy in over 75 per cent of our patients on the first visit. As long as one has the facilities to do simple colony counts he should not hesitate to order them. The most important aspect of the whole problem, however, is careful follow-up and repetitive urine cultures.

Summary

Eight hundred and fifty-six urine cultures (colony counts) were performed during a 12-month period (1964 to 1965). The results were analyzed and correlated with the clinical symptoms and subsequent course of the patients. Sixty-eight per cent of cultures were negative (no growth or less than 10^3 colonies per ml.); 8 per cent were positive (10^5 or more colonies per ml.); and 24 per cent were in the doubtful range (10^3–10^5 colonies per ml.). Careful follow-up of the indefinite group of cultures revealed that no conclusion can be drawn from a single clean-catch urine with 10^3 to 10^5 bacteria per ml.

A second or third colony count usually resolved the question as to whether a urinary tract infection was present or not. In conclusion, we have found that the use of the streak plate for colony counting has been a simple and effective method for the detection of bacteriuria and, in our experience, has been an invaluable screening and accurate test for the diagnosis and management of urinary-tract infections.

References

1. NEUMANN, C. G., AND PRYLES, C. V.: Amer. J. Dis. Child., 1962, **104,** 215.
2. GUSTAFSON, S. R., AND COURSIN, D. B.: The Pediatric Patient 1964. Philadelphia: Lippincott, 1964. **1,** 93–114.
3. PRYLES, C. V.: Round table presentation on urinary tract infection at the meeting of the American Academy of Pediatrics in New York City, October 24–29, 1964.
4. LAPIDES, J.: J.A.M.A., 1966, **195,** 248.
5. HINKLE, N. H., PARTIN, J. C., AND WEST, C. D.: Amer. J. Dis. Child., 1960, **100,** 333.
6. DELUCA, F. G., FISHER, J. H., AND SWENSON, O.: New Eng. J. Med., 1963, **268,** 75.
7. WEST, C. D., AND HOLLAND, N.: Round table presentation on urinary tract infection at the meeting of the American Academy of Pediatrics in Chicago, October 23–28, 1965.
8. PRYLES, C. V., LÜDERS, D., AND ALKAN, M. K.: Pediatrics, 1961, **27,** 17.
9. NETER, E.: Ped. Clin. N. Amer., 1964, **11,** 517.
10. ALLEN, T. D.: New Eng. J. Med., 1965, **273,** 1421.
11. KUNIN, C. M., SOUTHALL, I., AND PAQUIN, A. J.: Ibid., 1960, **263,** 817.
12. RANDOLPH, M. F., AND GREENFIELD, M.: Amer. J. Dis. Child., 1965, **110,** 523.
13. CAMPBELL, M.: Clinical Pediatric Urology. Philadelphia: Saunders, 1951, p. 3.
14. STANSFELD, J. M.: Arch. Dis. Child., 1962, **37,** 257.
15. PRYLES, C. V.: Pediatrics, 1960, **26,** 441.
16. HOEPRICH, P. D.: J. Lab. Clin. Med., 1960, **56,** 899.
17. NELSON, J. D., AND PETERS, P. C.: Pediatrics, 1965, **36,** 132.

The Oral Contraceptives and Infertility

HERBERT L. KOTZ, M.D., F.A.C.O.G.*, AND OSCAR I. DODEK, JR., M.D.*

THE ADVERSE EFFECTS of oral contraceptives remain a subject of extreme concern to both patient and physician. In addition to the commonly known and occasionally distressing side-effects of nausea, vomiting, abdominal bloating, breast tenderness, weight gain, fluid retention, breakthrough bleeding, and missed menses[1] the literature has stressed the possibility of thrombophlebitis with pulmonary embolism,[2-6] coronary thrombosis,[7] neuro-ophthalmologic syndromes including headache, stroke, blindness, and even death,[8-13] and now persistent anovulation and infertility following cessation of therapy.[14]

The purpose of this paper is to call further attention to the syndrome of anovulation and infertility following oral contraceptive therapy in patients with previously regular menses. We present 2 successfully treated patients from our private practice.

Report of Cases

Case 1. L.K., a 22-year-old gravida 0 Caucasian was referred on September 29, 1964 for an infertility evaluation. She had been placed on Enovid® as an oral contraceptive at the time of her marriage in June, 1963. The contraceptive pills were discontinued in February, 1964.

Menarche was at age 12. Her periods were always regular, occurring every 29 days, lasting 5 to 6 days, and accompanied by premenstrual molimina and dysmenorrhea. Following cessation of oral contraceptive therapy the menses were irregular. Between February, 1964 and her initial office visit in September, 1964 she had 2 episodes of prolonged cycles during which the diagnosis of pregnancy was entertained but never established.

On initial physical examination the patient displayed a normal feminine configuration. There was mild facial acne. The hair distribution was not unusual and the breasts were well developed. Pelvic examination revealed normal external genitalia with a normal clitoris. The uterus and adnexa were palpable and normal.

Infertility and endocrine evaluation indicated adequate endogenous estrogen as evidenced by excellent arborization of clear, elastic cervical mucus and by a withdrawal menstrual flow following oral administration of 10 mg. of 6-alpha methyl-17 acetoxy progesterone daily for 5 days. Basal body temperature charts between September, 1964 and January, 1965 confirmed the absence of ovulation.

Skull X-ray films revealed no abnormality of the sella turcica. A 24-hour urinary excretion of 17-ketosteroids was 12.3 mg., and the protein-bound iodine was 3.5 mcg. per cent.

A 10-hour postcoital examination of the cervical mucus revealed 2 to 5 progressively motile sperm per high-power field, and the semen analysis was normal. A Rubin's carbon dioxide tubal insufflation indicated tubal patency by auscultation, thermograph, and prompt bilateral shoulder pain.

L-thyroxine therapy, 0.1 mg. per day, was initiated on December 21, 1964. The patient remained anovulatory until prednisone, 5 mg. twice daily, was started January 29, 1965, her first ovulatory menses occurring February 25, 1965. She also had ovulatory cycles in March, April and May as evidenced by a biphasic basal body temperature curve and endometrial biopsy.

She conceived in early June, 1965 and had a normal vaginal delivery of a 5 pound, 10 ounce female infant in good condition on January 14, 1966.

Case 2. C.K., a 23-year-old gravida 0 Caucasian was referred on March 29, 1965 for an infertility evaluation. She had used Enovid, 5 mg. cyclically, for contraception from the time of her marriage in 1962 until July, 1964.

The menarche was at age 13 and the periods were always regular, occurring every 30 days, lasting 5 days, and associated with premenstrual molimina and dysmenorrhea. Following cessation of the Enovid her periods became grossly irregular and she had complete amenorrhea from November, 1964 until her visit in March, 1965. She also complained of facial acne and slight diminution of breast size since discontinuing oral contraception.

On physical examination she displayed a normal feminine configuration. There was marked facial acne. The hair distribution was normal and the breasts were well developed. Pelvic examination revealed normal external genitalia, and the clitoris was not enlarged. The uterus and adnexa were normal.

---

* Assistant Attending in Obstetrics and Gynecology, Washington Hospital Center, Washington, D.C. 20010.

Endocrine and infertility evaluation indicated adequate endogenous estrogen as evidenced by arborization of the cervical mucus and by a withdrawal menstrual flow following oral administration of 10 mg. of 6-alpha methyl-17 acetoxy progesterone daily for 5 days. The patient had measured her basal body temperature from January 18, 1965 through March 29, 1965 while she was amenorrheic, and there was no evidence of a biphasic curve.

Skull X-ray films revealed no abnormality of the sella turcica. A 24-hour urinary excretion of 17-ketosteroids was 14.6 mg., and the protein-bound iodine was 5.1 micrograms per cent.

A 10-hour postcoital examination revealed innumerable progressively motile sperm per high-power field, and a sperm count confirmed the absence of a male factor. The Rubin's test was diagnostic of tubal patency.

The patient was started on prednisone, 5 mg. twice daily, on May 10, 1965 and had an ovulatory period on June 16, 1965 as indicated by a biphasic basal body temperature curve. She conceived in early July, 1965 and at the time of this report is near the end of an uneventful pregnancy.

Comment

It is well recognized that there may be a delay in resumption of normal menses after cessation of cyclic oral contraceptive therapy. This is a frequent cause of suspected pregnancy and results in otherwise unnecessary office visits and considerable anxiety. However, the possibility of persistent anovulation is much more important and has only recently been reported. Although the exact incidence cannot be given, Whitelaw, Nola and Kalman[14] mentioned personal communications with several well known obstetricians and gynecologists that led them to the conclusion that there are hundreds of unreported patients with amenorrhea of 3 months or more or marked irregularity in their menstrual cycles and infertility following discontinuation of oral contraceptive therapy. Many of our colleagues also claim similar cases. It is obvious that the relative frequency of this complication is higher than has been suspected.

Gaul[15] reported that 17 per cent of the women in a group of 115 with pregnanediol excretion titers who were observed after withdrawal of oral sequential contraceptive pills showed no elevation in their excretion levels during the first 3 months. Maqueo[16] in another group of slightly over 100 women also treated sequentially reported that 22 of 24 biopsies done shortly before menstruation the third month after withdrawal of the tablets showed proliferative endometrium.

Whitelaw and associates[14] hypothesized that the action of the oral synthetic progestins in producing anovulation is the depression of gonadotropin output. This is most likely due to interference with the proper function of hypothalamic nuclei concerned with cyclic gonadotropin release. Unfortunately, at the present time there is no way to delineate prior to treatment those patients in whom anovulation will persist.

In view of these observations it seems pertinent to comment on the advisability of using synthetic progestational agents for contraceptive purposes or for improvement of fertility in the healthy nulliparous or primiparous patient. Long-term follow-up and results of treatment are not yet available for those cases reported by Whitelaw et al or for those he alluded to. However, these authors noted that some of their patients had severe atrophy of the endometrium and appeared to be relatively unresponsive to various types of therapy including clomiphene citrate.*

We therefore believe that it is the physician's responsibility to inform the patient who has not yet completed her family of the possibility of being infertile for an indeterminate period of time following discontinuation of oral contraceptives. We do not, however, believe that this sequela of therapy (or the others reported to date) is an absolute contraindication to the use of oral contraceptives. We presently use them (1) when there is a definite contraindication to pregnancy for medical or social reasons, (2) when no other method is suitable or satisfactory to the patient, and (3) when the patient chooses this method despite a full explanation of the usual side-effects and a summary of the current views on potential hazards. In no case do we use these oral contraceptive drugs in patients with severe hypertension, recurrent vascular headaches, Raynaud's or other vasospastic phenomena, a history of occlusive arterial disease, a history of venous thrombosis or thrombophlebitis, or epilepsy.

Faced with a patient who has not resumed normal menses by 3 months following cessation of oral contraceptive therapy, a comprehensive endocrine evaluation should be instituted. This includes assessment of pituitary, thyroid, adrenal, and ovarian function.

Both of our patients had 17-ketosteroid excretion at the upper limits of normal and responded to low dosage prednisone therapy with the return of ovulatory menses. Under classical endocrine theory[17] this would establish the diagnosis of androgenic adrenal hyperplasia. In accordance with this teaching the suppression of adrenal androgen permits the resumption of cyclic gonadotrophin release. However, the action of prednisone in the induction of ovulation has never been clearly established and may well be a nonspecific action rather than a suppressing effect on adrenal androgen. Therefore, in our opinion, a favorable response to prednisone therapy does not necessarily indicate the presence of adrenal hyperplasia. The premise that the infertility was based on anovulation is supported by the pregnancies which rapidly followed the resumption of normal menstrual cycles.

---

* Clomid, a product of the Wm. S. Merrell Company, Cincinnati, Ohio.

In view of the potential hazards of the oral contraceptives mentioned above we are taking this opportunity to question the evidence that the cyclic use of these drugs can ever improve the fertility of patients with regular ovulatory menses. Their use for this purpose demonstrates the distressing plight and impotency of the physician responsible for the care of the "normal" infertile couple. Critical examination of available data fails to reveal either scientific verification of the effectiveness of this method or a suitable explanation for its proposed efficacy. The therapy is based on a retrospective comparison of quite different uncontrolled series of patients. In one, Tietze[18] analyzes 1,727 cases of planned pregnancies following cessation of mechanical or chemical contraceptive measures taken from the private practices of A. F. Guttmacher and S. Rubin in the 1940's and a comparable series of 950 patients communicated by C. F. Westoff. This study,[19] first published in 1950, revealed that 34 per cent of all pregnancies occurred during the first month after contraception had been discontinued and 78 per cent during the first 6 months. The other series on which the comparative analysis is based consist of 41 patients reported by Goldzieher[20] and 61 by Rice-Wray[21] attempting pregnancy after cessation of oral contraceptive therapy. Twenty-six of the 41 (62 per cent) and 37 of the 61 (61 per cent) were pregnant in 1 month. They conclude that the difference between these 2 series is highly significant ($p = 0.001$). This then is the basis for the presumed effectiveness of oral contraceptives in increasing fertility. However, the fallacy of such a conclusion should be obvious. A valid comparison would require comparable groups of proven and equal fertility as well as adequate first-month exposure in all cases.

The high rate of conception in the first post-treatment cycle reported by Goldzieher and Rice-Wray is somewhat disturbing in that it is not consistent with the studies of Gaul and Maqueo which indicate anovulation to be the rule at this time. Furthermore, Banks et al[22] in a detailed study of pregnancy following use of progestin-like substances for contraception did not find fertility to be increased. In the first month 37 per cent of their patients became pregnant—a figure quite comparable to that reported by Tietze. Even if we accept a high first-month pregnancy rate for all fertile women discontinuing oral contraceptives, the conclusion that the drugs would improve fertility in a subfertile group does not seem warranted.

We should also point out that the patients reported by Goldzieher and Rice-Wray were on oral contraceptives for a considerably longer time than the 3 months commonly recommended for the infertile patient.

Unfortunately, controlled series have not to our knowledge been published, and the proponents of this therapeutic modality for infertility have been able to describe its mechanism only as a "rebound" or "priming" phenomenon. It is not clear to us what the physiologic changes are that "rebound" and result in increased fertility. Clinical infertility work is often disappointing and success not rarely appears fortuitous, but, grasping at such unscientific straws as the use of oral contraceptive agents in normal patients does not seem judicious in view of potential hazards.

The clinical application of this method for improvement of fertility has unfortunately, but not unexpectedly, been disappointing. Tyler and Olson[1] have reported 64 patients with "infertility of unknown cause as well as some with moderately hypoplastic uteri" treated with various progestational agents. Although details are not presented, this "rebound" therapy resulted in conception within the 2 succeeding cycles in 2 of 23 patients (9 per cent) on norethindrone and 3 of 20 (15 per cent) on norethynodrel. These authors conclude that prospects for use of these preparations for "priming" or "rebound" therapy are not encouraging.

We therefore urge that oral contraceptives not be utilized in the treatment of infertility, at least until a proper and complete evaluation including culdoscopy and immunologic studies have been performed and no abnormality is found.

Summary

The case histories of 2 successfully treated patients with anovulation and infertility following cessation of oral contraceptive therapy have been presented. The potential hazards of the oral contraceptives as recorded in the current literature have been outlined and the advisability of their use in the normal infertile couple questioned.

References

1. Tyler, E. T., and Olson, H. J.: J.A.M.A., 1959, **169,** 1843.
2. Jordan, W. M.: Lancet, 1961, **2,** 1146.
3. Tyler, E. T.: J.A.M.A., 1963, **185,** 131.
4. McIntyre, N., Phillips, M. J., and Voigt, J. C.: Brit. Med. J., 1962, **2,** 1029.
5. Reed, D. L., and Coon, W. W.: New Eng. J. Med., 1963, **269,** 622.
6. Morrell, M. T., and others: Brit. Med. J., 1963, **2,** 830.
7. Naysmith, J. H.: Ibid., 1962, **2,** 315.
8. Cogan, D.: Arch. Ophthal. (Chicago), 1965, **73,** 411.
9. Shafey, S., and Scheinberg, P.: Neurology (Minneap.), 1966, **16,** 205.
10. Baines, G. F.: Brit. Med. J., 1965, **1,** 189.
11. Ehtishamuddin, M.: Ibid., 1965, **1,** 924.
12. Nevin, N. C., Elmes, P. C., and Weaver, J. A.: Ibid., 1965, **1,** 1586.
13. Lorentz, I. T.: Ibid., 1962, **2,** 315.
14. Whitelaw, M. J., Nola, V. F., and Kalman, C. F.: J.A.M.A., 1966, **195,** 160.
15. Gaul, C., and others: Excerpta Med., October 1965, abstract 372.
16. Maqueo, T. M., and others: Ibid., abstract 375.
17. Kotz, H. L., and Herrmann, W.: Fertil. Steril., 1961, **12,** 271.
18. Tietze, C.: Eugen. Rev., 1959, **50,** 231.
19. Tietze, C., Guttmacher, A. F., and Rubin, S.: Fertil. Steril., 1950, **1,** 338.
20. Goldzieher, J. W., Rice-Wray, E., and Schulz-Contreras, M.: Amer. J. Obstet. Gynec., 1962, **84,** 1474.
21. Rice-Wray, E., Goldzieher, J. W., and Aranda-Rosell, A.: Fertil. Steril., 1963, **14,** 402.
22. Banks, A. L., Rutherford, R. N., and Coburn, W. A.: Obstet. Gynec., 1965, **26,** 760.

New College of Allied Health Professions

A College of Allied Health Professions is being established at the Temple University Health Sciences Center, Philadelphia, according to an announcement, April 6, 1966, by President Millard E. Gladfelter.

Dr. Gladfelter said the new College will educate men and women to serve in the important auxiliary positions on the health care team. Bachelor of Science courses will be offered in medical technology, nursing, occupational therapy, physical therapy, and medical records library science. The new College will accept students who have completed 2 years of liberal arts work at Temple or other accredited undergraduate colleges or universities.

In support of an apparent need for such a college Temple has estimated the national needs (hospitals, governmental agencies, research institutions, industry, private practice, etc.) for professional personnel in the allied health sciences. The estimates in the following table are based upon various reports of the Public Health Service and articles by Dr. Howard Rusk in the *New York Times*. All numbers are approximate.

Professional Category	Number Currently Employed*	Net Additionel Personnel Needed in		Number Graduating Each Year
		1965	1970	
Medical Technologists	33,000	25,000	50,000	6,800
Occupational Therapists	4,000	9,000	23,000	910
Physical Therapists	8,000	8,000	25,000	1,040
Medical Record Librarians	3,000	3,000	5,000	240
Professional Nurses‡	550,000	70,000	370,000	31,190§

* Numbers are expressed as "full-time equivalents."

† From approved and accredited schools in most recent year for which figures are available.

‡ Includes all R.N.'s regardless of type of program from which graduated. All other professional categories include only graduates of baccalaureate or post-baccalaureate programs.

§ Includes the following programs: Diploma—25,730; Associate Degree—1,160; Baccalaureate—4,300.

The Effect of Moderate Total Body Hypothermia on Experimental Irreversible Renal Failure

ERWIN HIRSCH, M.D.*, IRA BRECHER, M.D.†, AND IRA N. TUBLIN, M.D.‡

Total body hypothermia has been reported as an ancillary form of treatment in patients with acute renal failure.[1, 2] The rationale of cooling the oliguric patient is 2-fold, first, to slow body metabolism and the production of nitrogenous wastes, second, to ameliorate the degree of renal injury. There have been no controlled studies of total body hypothermia in patients with acute renal failure.

Animal experimentation has demonstrated a prolongation of viability of explanted kidneys when the explanted organ alone is cooled.[3] There is one study which indicates that total body hypothermia to 28–30° C increases survival and ameliorates the course of induced reversible acute renal insufficiency.[4]

The purpose of our experiment was to determine the effect of moderate (30° C) total body hypothermia on the course of irreversible renal failure.

Plan of Study

Twenty adult mongrel dogs were divided into control ($N = 8$) and experimental ($N = 12$) groups. All animals were allowed a standard diet for 8 to 10 days prior to the experimental procedure. The animals were anesthetized with thiopental 0.22 c.c./Kg. intraperitoneally. Through a midline lower abdominal incision both ureters were isolated at their entrance to the urinary bladder, doubly ligated and divided. Following closure of the incision the control animals were kept on a constant temperature blanket set at 36.6–37.2° C. The experimental animals were rapidly cooled to 30° C by immersion in ice water and then maintained at this level of hypothermia on a constant temperature blanket. Pentobarbital was given intravenously as necessary in dosages sufficient to keep the animal prone on the blanket and to prevent shivering. The control animals received enough pentobarbital to keep their activity diminished. Rectal temperatures were monitored by thermocouple probe in both groups. Both control and experimental groups received 5 per cent glucose (0.2 c.c./Kg./hr.) by continuous intravenous infusion. Weights were obtained on all animals at the time of surgery and at death. Blood was drawn daily from all animals for determination of blood urea nitrogen.

The animals were observed frequently (every 4 to 6 hours) and were turned from side to side if their level of consciousness prevented their moving about. The length of survival was calculated to the nearest 24-hour periods. A gross inspection of the internal organs was made at the time of death.

Results

There was no significant difference in weights between the control and experimental group initially or finally ($p > .05$, table 1).

TABLE 1: Characteristics of Experimental and Control Groups

	Weight—Lbs.		Initial Blood Urea Nitrogen mg. per cent
	Initial	Final	
Experimental			
N = 12			
Mean	39.7	35.9	26.3
S.D.	9.7	8.7	16.4
Control			
N = 8			
Mean	35.5	31.7	22.1
S.D.	4.9	5.4	9.2

The 2 groups had initial blood urea nitrogens that did not differ significantly ($p > .05$, table 1). The range of temperatures of the experimental group was 30–33° C. The experintal animals received approximately 1½ times as much pentobarbital as the control group over the course of the experiment.

---

* Fellow in Surgery, Washington Hospital Center, Washington, D.C. 20010.

† Resident in General Surgery, Washington Hospital Center.

‡ Senior Attending Physician, Department of Medicine, Washington Hospital Center.

At 3 days 8 out of 8 controls and 10 out of 12 experimental animals were alive. At 4 days 4 out of 8 control and 5 out of 12 experimental animals were alive, and at 5 days 1 out of 8 control and 2 out of 12 experimental animals were alive. None of these differences are significant.

Blood urea nitrogens are listed in table 2.

TABLE 2: Blood Urea Nitrogen (mg. per cent)

ANIMAL	Day 1	Day 2	Day 3	Day 4	Day 5
Experimental					
X	21	72	104	—	—
V	43	103	174	—	—
U	30	93	96	—	—
W	33	53	102	134	—
T	14	56	84	111	—
P	13	49	—	—	—
M	17	76	155	—	—
L	23	103	110	160	240
K	13	69	—	—	—
H	22	69	102	—	—
E	17	23	56	79	146
C	70	86	157	243	—
Control					
R	18	39	81	138	—
S	15	81	159	168	
Q	16	32	36	181	198
O	14	144	179	—	—
J	20	95	155	190	—
I	22	74	126	—	—
B	40	61	128	157	—
G	32	103	166	—	—

The data are recalculated and summarized in table 3 as the mean incremental daily change in blood urea nitrogen (Δ BUN). There was no significant difference between the experimental and control animals in Δ blood urea nitrogen at any time interval after the operation.

TABLE 3: Incremental Rise in Blood Urea Nitrogen

	EXPERIMENTAL	CONTROL
Δ BUN day 1	44.5 (21.9) N = 12	56.5 (38.2) N = 8
Δ BUN day 2	40.6 (26.4) N = 10	45.0 (21.6) N = 8
Δ BUN day 3	43.6 (25.8) N = 5	63.7 (56.4) N = 4

( ) = S.D.

At postmortem examination the ureters were found to be adequately ligated in all animals. Ten of the 12 experimental animals had significant pneumonitis. The 2 animals without pneumonitis were the 5-day survivors of this group. None of the control animals had pneumonia.

Discussion

The data obtained under the conditions of this experiment fail to support the hypothesis that lowering body temperature to 30° C will decrease the accumulation of urea in this experimental situation.

The major body production of urea is dependent on enzyme systems acting upon a group of amino acids in the liver as described by Krebs.[5]

There are no available data from in vitro experiments with liver slices which indicate the effect of hypothermia on these specific enzyme systems or on urea production, but it is generally assumed that hypothermia would slow urea production.

In the guinea pig pentobarbital decreases urea formation by the liver rather than increasing it.[6] Therefore, the larger doses of pentobarbital used in the experimental group are most probably not an explanation for the lack of significant difference between the experimental and control groups. No similar data are available in dogs.

The most reasonable explanation for the failure to show a significant difference in the rate of rise of blood urea nitrogen in the cooled and uncooled animals is the development of pulmonary inflammation in the cooled animals. The increased dosage of pentobarbital necessary to keep the animals from shivering predisposes to aspiration and prevents the normal mechanisms of bronchial toilet. An increase in the metabolic rate due to active infection is associated with an increase in the catabolism of protein. Of interest is that the 2 of the 12 dogs who did not develop pneumonia survived 5 days and that one of them had the least incremental increase of blood urea nitrogen.

Summary

A series of 20 dogs were subjected to bilateral ureteral ligation. Twelve were cooled to 30° C, and the rest were maintained at normal temperature. No significant differences were found in the survival or rate of accumulation of urea in the blood between the 2 groups. Ten of the 12 cooled animals died with pneumonia.

(*Continued on page 296*)

PRESIDENT'S PAGE

A PROPOSED METROPOLITAN WASHINGTON REGIONAL CENTER

As an outgrowth of the DeBakey Committee report, Congress passed and President Johnson signed in 1965 Public Law 89-239 for the creation of Regional Centers for Heart Disease, Cancer, Stroke, and Related Diseases. Not only has the budgetary support of this bill been substantially reduced since its enactment, but also the interpretations have been materially altered—no funds will be made available for new construction and no new establishments are to be created. It is becoming increasingly evident that the program is meant to be an advanced and sophisticated postgraduate educational effort, designed to bring modern medical advances in these and related diseases to the practicing physician.

Since all states or regions have already or will participate the Medical Society of the District of Columbia has, on the recommendation of its Committee on Regional Centers, exercised its proper leadership in developing a Regional Advisory Group for the purpose of composing an application for a planning grant. The recently published guidelines are clear in requiring that in addition to the involved medical societies, representation from medical schools, local hospital associations, related voluntary health organizations, the public health department, and the public at large must be included in the Regional Advisory Group. Having a broad spectrum of interest this group will initiate a plan to meet the needs of the region; it must, however, reflect emphasis on a functional relationship between medical research, education, and improved patient care. Our Regional Advisory Group is currently preparing a plan, application for which will be made by the Medical Society of the District of Columbia.

Since the established guidelines define a region as "a geographic area which is economically and socially related," it is hoped that all adjacent counties will desire inclusion in the Washington Metropolitan Region.

Robert J Coffey

Flagyl destroys trichomonads
here & here & here & here
No topical treatment can

Flagyl®

brand of
metronidazole

Flagyl eliminates the difficulties and frustrations that have long attended the treatment of trichomonal infection.

These difficulties arose mainly from:

1) the failure of any previously known agent to destroy the protozoan in paravaginal crypts and glands;

2) the failure of any previously known agent to prevent reinfection by eradicating the disease in male consorts.

The introduction of Flagyl removed both of these long-standing deficiencies. Hundreds of published investigations in thousands of patients have confirmed the ability of Flagyl to cure trichomoniasis.

Correctly used, with due attention to repeat courses of treatment for resistant, deep-seated invasion and to the presumption of reinfection from male consorts, Flagyl has repeatedly produced a cure rate of up to 100 per cent in large series of patients.

Nothing cures trichomoniasis like Flagyl.

Dosage and Administration

In *women:* one 250-mg. oral tablet t.i.d. for ten days. A vaginal insert of 500 mg. is available for local therapy when desired. When the inserts are used one vaginal insert should be placed high in the vaginal vault each day for ten days, and concurrently two oral tablets should be taken daily.

In *men:* in whom trichomonads have been demonstrated, one 250-mg. oral tablet b.i.d. for ten days.

Contraindications

Pregnancy; disease of the central nervous system; evidence or history of blood dyscrasia.

Precautions and Side Effects

Complete blood cell counts should be made before and after therapy, especially if a second course is necessary.

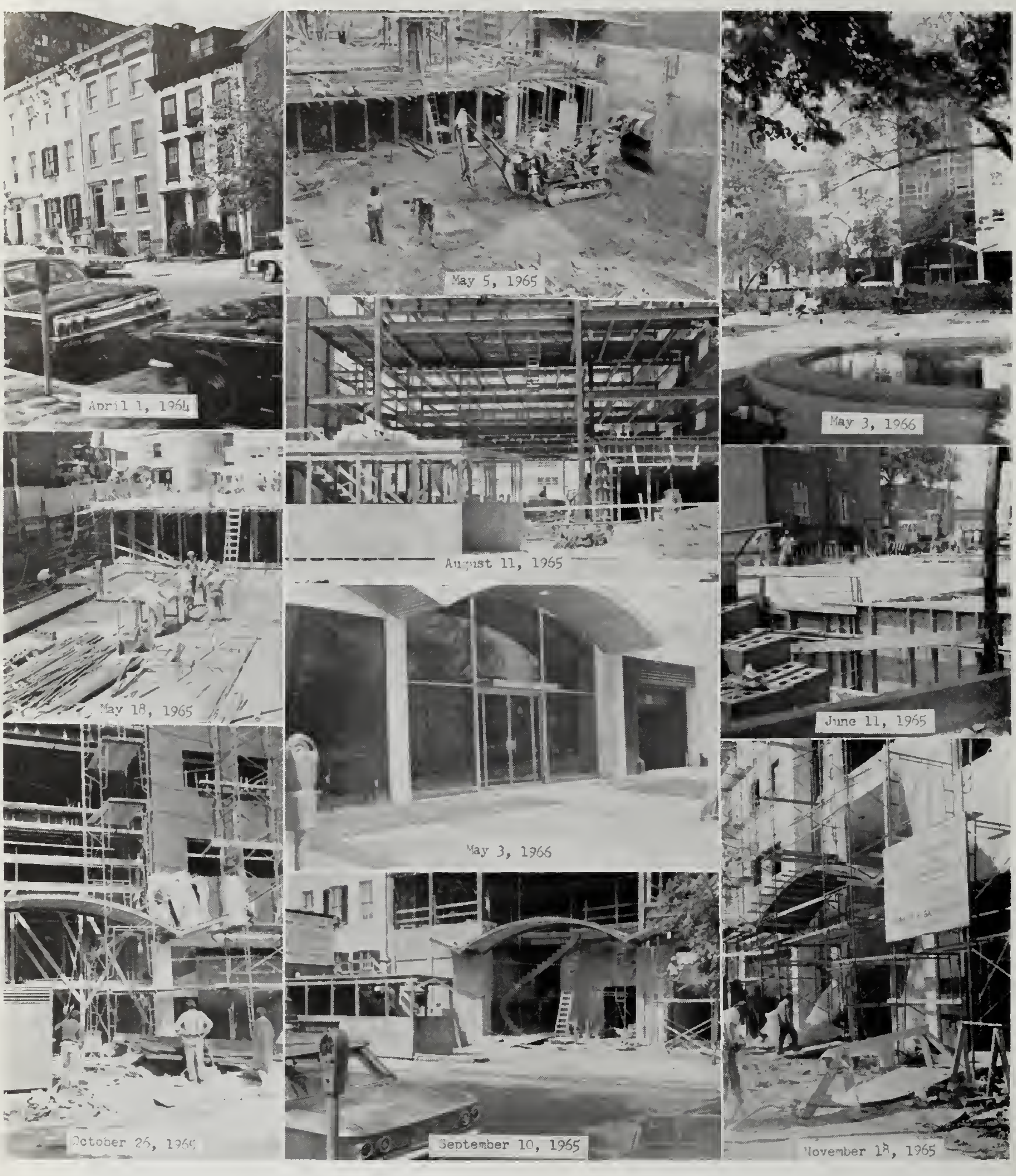
Infrequent and minor side effects include: nausea, unpleasant taste, furry tongue, headache, darkened urine, diarrhea, dizziness, dryness of mouth or vagina, skin rash, dysuria, depression, insomnia, edema. Elimination of trichomonads may aggravate moniliasis.

Dosage Forms

Oral–250-mg.tablets/Vaginal–500-mg.inserts

SEARLE

Research in the Service of Medicine



April 1, 1964

May 5, 1965

May 3, 1966

August 11, 1965

May 18, 1965

May 3, 1966

June 11, 1965

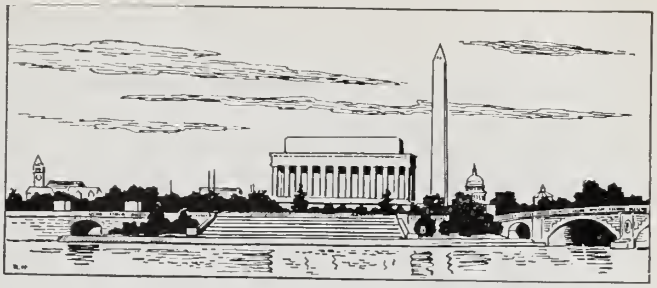
October 26, 1965

September 10, 1965

November 18, 1965

Photos by A.L.E.

Construction of 2007 Eye Street, N.W.



EDITORIALS

A New Home for a New Age*

As WE GATHER to dedicate this new home of the Medical Society of our community let us remember the lovely lines of the ancient psalmist: "Except the Lord build the house they labor in vain that build it; except the Lord keep the city the watchman waketh but in vain."

May this house become a home for the noblest vision of healing of our age; where dedicated men will gather to share the wisdom of their insight and their skills; where this physical structure will help to strengthen the spiritual bonds of devoted souls seeking to preserve life and to soothe pain; where the fellowship of physicians will quicken our faith in the loving kindness of men born in the image of the divine.

Give us the strength of mind and of heart to be true to our sacred purpose. Guide us and guard us so that we will bring new blessing unto a new age.

NORMAN GERSTENFELD, D.D.
Rabbi of the Washington
Hebrew Congregation

---

* Invocation delivered at the Dedication Ceremony of the new Medical Society Building, March 13, 1966.

Laying of the Cornerstone

Remarks of President Robert J. Coffey

Honored guests, fellow members of the Medical Society of the District of Columbia, and ladies and gentlemen:

When I was asked as President of the Society to lay the cornerstone I realized that I not only knew nothing about the procedure but was in a quandary as to where to seek out the information. However, our capable Executive Secretary, Mr. George Cooley, provided me with a copy of the Transactions of a similar ceremony carried out in 1921 at the time of the dedication of our former building. He further instructed me that the protocol that had been established at that time could appropriately be followed here. On reading the first statement in the Transactions I immediately received his message—it read that the President of the Society, Dr. Francis Hagner, made some brief remarks. The word "brief" had been underlined in ink by someone, not necessarily Mr. Cooley. However, I will conform to that protocol, I assure you.

I should like to refer, however, to a few historical points made at that time by Dr. Hagner which would seem to be appropriate today. He pointed out that our Society, which now numbers well over 1,600 members, was established in 1817 by a group of 16 physicians. Our community of Washington had at that time a population of 10,000, had been captured and burned by an enemy only 3 years previously, and, as a witty French woman had stated, it was 'a city of streets without houses,' in contrast to a nearby community, Georgetown, which was 'a city of houses without streets.' Washington has grown, our Society has grown, and today we not only have the streets and houses but many beautiful buildings of which the one we are dedicating today is a fitting example.

LAYING THE CORNERSTONE: President Coffey, with the expertise of a surgeon, wields the trowel as AMA President Appel (center) and Executive Board Chairman Dryden register their approval.

On laying this cornerstone, which consists of a copper box containing official papers of our Society, I should like to plagiarize a statement made at the former dedication by Dr. William Gerry Morgan, President of the American Medical Association in 1929 and the fourth member of our Society to receive that distinctive honor. Dr. Morgan, who was Dean of the School of Medicine at Georgetown University for many years, stated on that occasion: "The aim of this Medical Society as typified by this bulding is the elevation of the profession to a higher scientific standard for increased public usefulness. There can be no doubt that this aim concerns the public even more than it does the profession. The more highly developed the scientific attainments of the medical profession, the more it redounds to the advantage of the public which receives thereby increasingly efficient service from the individual members of the profession. It is in this way that the interests of the profession and the laity are interwoven."

With these words I lay the cornerstone of our new and beautiful Medical Society headquarters.

Contents of Cornerstone

Transactions and Proceedings of the Seventy-fifth Anniversary of the Medical Society of the District of Columbia, February 16, 1894.
Constitution of the Medical Society of the District of Columbia and list of members, year 1897.
Constitution and By-laws of the Medical Society of the District of Columbia, 1966.
The Erection and Dedication of the Home of The Medical Society of the District of Columbia, 1922.
Front pages of *The Washington Post* and *The Sunday Star* for March 13, 1966, the day the new headquarters at 2007 Eye Street was dedicated.
List of members of the House and Building Fund Committees for 1963, 1964, 1965 and 1966.
The Relative Value Scale adopted by the Executive Board, 1966.
Public Law 89–97 (Medicare)
Public Law 89–239 (Regional Programs on Heart Disease, Cancer and Stroke)
A set of coins, a dollar bill, and a 2-dollar bill.
Lists of Society Officers and Committee Personnel for 1965 and 1966.
Copy of MEDICAL ANNALS for March 1966.
Copies of *Washington Medical Annals* for January 1918 and January 1920.

Dedication Ceremonies

March 13, 1966

"As CHAIRMAN of the Medical Society's Executive Board, I have the privilege of acting as Chairman of the Dedication Program here today. This is the only Medical Society chartered by Congress and the first scientific organization chartered by Congress. This, as you all know, is the second headquarters of this Society. The first, at 1718 M Street, N.W., was dedicated in January 1921. That building served the Society well for some 45 years. We hope this new headquarters will serve as a base of operation from which we may continue to serve the health needs of this community with even greater efficiency. Dr. Pellegrini will speak a little later about this matter, so I shall say 'welcome' to all of you for honoring us with your presence at this dedication of 2007 Eye Street, N.W., Washington."

With these words Dr. J. Spencer Dryden opened the dedicatory ceremonies in the Exhibit Hall at 2:30 p.m., directly following the laying of the cornerstone by President Coffey at 2:00 p.m.

On the platform with Dr. Dryden were President Coffey; the guest speaker, Dr. James Z. Appel, President of the American Medical Association; Rabbi Norman Gerstenfeld, of the Washington Hebrew Congregation; Dr. Philip R. Lee, Assistant Secretary of Health, Education, and Welfare; Mr. Renah F. Camalier, former District Commissioner; Dr. Edward W. Nicklas, Past President of the Medical Society; and Dr. Frank S. Pellegrini, Chairman of the House and Building Committee. Rabbi Gerstenfeld gave the Invocation (see page 265).

President Coffey was called upon to present a Certificate of Honorary Membership to Mr. Camalier for his help in securing numerous approvals required by the City of Washington,

MR. RENAH F. CAMALIER is congratulated by Chairman Dryden after accepting his Certificate of Honorary Membership into the Medical Society.

thus enabling the Medical Society to occupy its building relatively on schedule.

Dr. Dryden requested the Society's Executive Director to come to the platform to be recognized and to accept a certificate which read: "Presented to George W. Cooley by The Medical Society of the District of Columbia in grateful appreciation for his untiring efforts in the planning, creation, and supervision of the erection of the new Medical Society headquarters building."

Dr. Pellegrini, Chairman of the House and Building Committee, was presented. For the last 2 years, Dr. Dryden said, "he has devoted many hours of his time to accomplishing the impossible—the enormous task of completing this magnificant building a few months after the date scheduled." He called on him for a few comments, which are published following these proceedings.

Following Dr. Pellegrini's remarks, Dr. Dryden introduced some of the distinguished guests present. They included the speaker's wife and daughter, Mrs. Appel and Miss Charlotte Appel; Dr. John Parks, Dean of George Washington University School of Medicine, and Mrs. Parks; Dr. Robert S. Jason, until recently Dean of Howard University College of Medicine, and Mrs. Jason; Dr. John C. Rose, Dean of Georgetown University School of Medicine, and Mrs. Rose; Mr. Paul Foley, in charge of medical licensure in the District of Columbia, and Mrs. Foley.

Also, Drs. Daniel L. Borden, A. B. Bennett, and Frank M. McChesney, who were present at the 1921 dedicatory ceremonies; Mrs. O. Hugh Fulcher, President of the Woman's Auxiliary to the D. C. Medical Society; Mr. Warren Magee, the Society's Legal Counsel, and Mrs. Magee; Dr. Roy T. Lester, Director of the Washington Office of the AMA, and Mrs. Lester; Mr. Theodore Wiprud, who was Secretary of the District Medical Society from 1938 to 1962, and Mrs. Wiprud; Dr. C. Willard Camalier, Sr., Past President of the American Dental Association.

Dr. Lee, who has a large portion of responsibility for the administration of the Medicare Law, enacted by Congress last year, was invited to make a few remarks. He began by describing Dr. Appel as a "remarkable bridge between the medical profession and the Administration" through his constructive criticism. He praised the international good will created through the efforts of such dedicated men as General Kester Hastings, of MEDICO, and Bill Walsh, with his Project Hope. He said he could speak for the new Secretary of HEW, Mr. John W. Gardner, that his objective is to foster good relations between the Government and the profession. He outlined in general terms some of the implications of Medicare on the private practice of medicine.

EXECUTIVE DIRECTOR GEORGE W. COOLEY is awarded a special Certificate of Appreciation by Chairman Dryden for his "untiring efforts" in behalf of the building project.

Dr. Dryden introduced the principal speaker, Dr. Appel, as not only President of the American Medical Association but a general practitioner and surgeon engaged in private practice in Lancaster, Pa. Dr. Appel's speech appears in this issue as a special article.

Upon completion of Dr. Appel's speech, the formal program for the day was concluded. Refreshments were served in the Doctors' Lounge and those present were invited to inspect the building.

The Society's new headquarters occupies a lot 65 by 135 feet. To adequately describe the building is almost impossible and members who have not yet seen it are urged to inspect it and to make it their "medical home." With an imposing facade of white Vermont marble and black granite, it gives the appearance of a 6-story structure, although it is only occupied on 4 floors. The center motif, a tinted glass wall, contrasts aesthetically with the sparkling white marble. Just inside the door a dramatic, red-carpeted circular stairway leads to the second floor. The stair is unique in that it has a bent beam in the middle which supports the treads, allowing them to cantilever 2 feet on each side of the beam. The treads are precast concrete welded to the supporting beam. The handrails on either side of the stair are of bronze anodized aluminum.

The lobby with its green and black marble chip terrazzo floor and interior walls of white marble set in anodized bronze framework gives a pleasing impression of both dignity and serenity. The Doctors' Lounge, entered from the lobby, has a masculine decor with its vinyl wall covering and colorful, comfortable chairs and sofas. A split-level room, about 25 by 46 feet overall, it is deceptively large and suitable for social gatherings. A few steps lead up to a reading space furnished with bookcases, chairs, and tables. The furnishings were made possible by gifts and include a national award-winning painting by Dr. Milton L. Goldman.

The Lounge leads directly into the Exhibit Hall, 46 by 60 feet, which can be used for lectures, classes, exhibits, dinners, dances, etc. It has a stage, 12 by 22 feet, and is equipped with facilities for showing movies, slides, and X-rays. The Hall can accommodate 300 persons for lectures or 125 for table-seating. The 50 arm chairs and 200 chromium stack chairs have all been made possible by donations of members and related groups. To the left of this room is a very modern, efficient kitchen for catering dinners and lunches up to about 150 people. It is equipped with 2 refrigerators, 2 dishwashers, a stove and wall oven, and ample cupboard space.

The Medical Society's offices take up the entire second floor and include a suite at the rear for the Medical Bureau operators and offices for the President and the Woman's Auxiliary. The Secretary's office looks out on the small park across Eye Street. On the balcony at the top of the stairs is the receptionist's desk; on one wall hangs a watercolor of the old building at 1718 M Street, N.W. and on another the pictures of Past Presidents of the Society. The watercolor, commissioned by the Society, is the work of Lily Spandorf, a Viennese artist who came to Washington in 1960 and has gained a fine reputation in the city by preserving through her paint brush many of Washington's historic buildings.

The third floor contains a spacious Board Room with a large oval table and chairs marked by the names of their donors. There are 2 other conference rooms on this floor, one seating up to 75 persons, as well as the offices of the District of Columbia Division of the American Cancer Society and Medico-Care. On the fourth floor is the Washington Heart Association headquarters and the offices of the Metropolitan Blood Banks, Inc., and the Gorgas Memorial Institute. There is also a store room for the Medical Society. The third and fourth floors are equipped with small kitchens for serving light refreshments. The top floor (fifth) houses the gas-fired fan coil heating and cooling units.

There are 2 parking levels below the street, which will accommodate about 37 cars. This should be sufficient parking space for staff members and doctors who are attending committee meetings or who come to the Society on other business. There is an elevator from the lower parking level to the top floor.

Many Hands, Many Thanks

As in all projects of this type the Chairman receives more recognition and accolade than he deserves. Our thanks must go to the many men and women who helped immeasurably to complete this project. I should like to take a little time to give recognition to:

Dr. Ed Nicklas who, as Past President of the Medical Society, started the wheels of progress rolling;

Dr. Paul Wilner, immediate Past President, who kept the wheels of progress going by his participation in many meetings;

Dr. Victor Alfaro who, as Chairman of the House and Building Committee in 1963, not only planted the seeds of construction but was instrumental in the purchase of our present ground and the sale of the M Street property—and very advantageously for the Medical Society;

Those members of the House and Building Committees of 1963, 1964, 1965 and 1966 who spent hours on deciding the site, size and type of building, selection of architect and builder, perusing and revising the prints, discussing color schemes, etc. They are:

Daniel L. Borden
Ralph M. Caulk
Frederick Y. Donn
Leon Gerber
John F. Gillespie
Harold Heiges
Oscar B. Hunter, Jr.
David H. Kushner
Zigmond M. Lebensohn
Arthur H. Lewis
Arthur A. Morris, Jr.
Laszlo N. Tauber
Russell M. Tilley
James W. Watts
J. Rogers Young

The Woman's Auxiliary to the Medical Society of D. C. for the "ladies' touch," their many suggestions, and for a very attractive and efficient kitchen, as you will see on your tour. Thanks, Mrs. Jonathan Williams, Mrs. Hugh House, and Mrs. O. H. Fulcher.

Mr. John d'Epagnier, our architect, who, after listening to all our suggestions and demands, was still able to design an interesting and practical building. John, please stand and be recognized.

Skinker and Garrett, builders, especially Mr. Garrett, who responded to our many calls and gripes and always left us with the impression he would do something about them.

The unsung and behind-the-scenes' heroes, like Mr. Renah F. Camalier, regarding whom you heard our President express our thoughts.

The many physicians who donated generously so that we could refurnish many areas.

Dr. Pellegrini, Chairman of the House and Building Fund Committee, speaking his thanks for the assistance of many helping hands

And my especial thanks to Mr. George Cooley, our Executive Secretary, a bull-headed Irishman, without whom I am certain we would still be about midway through construction.

Those of us who have been intimately involved in the construction of this building feel proud of our accomplishment. We set out to construct a building of dignity which would adequately reflect the image of our Medical Society, and yet a building large enough for future expansion—one that would not saddle the Society with an excessively large debt and one that we could justly be proud to show friends and out-of-town colleagues.

I feel we have accomplished these goals.

Frank S. Pellegrini, M.D.
Chairman, House and Building Committee

Donors of Furnishings at MSDC Headquarters

The beautiful furnishings of the Medical Society's new building have been made possible by generous gifts from members of the Society and from allied organizations. Contributions from the following are acknowledged with gratitude by the House and Building Fund Committee. When so requested, the funds have been or will be used for special items of furniture to perpetuate the memories of both living and deceased members. As additional donations are received they will be acknowledged in the Medical Annals.

Members

Victor R. Alfaro
Francis C. Allman
Seymour Alpert
Charles G. Aronstein
Victor L. Assevero
Frank S. Bacon
Henry H. Balch
William G. Ballinger
William M. Ballinger
J. Gordon Bell
Sidney Berman
Christopher T. Bever
Philip Bloemsma
Lester S. Blumenthal
Martin B. Booth
Daniel L. Borden
Maxwell Boverman
Warren D. Brill
Garry S. Brody
Warren B. Burch
Irving Burka
Samuel Burtoff
C. Willard Camalier, Sr., D.D.S.
C. Willard Camalier, Jr.
Henry H. Canton
Harry N. Carlton
Hill Carter
Ralph M. Caulk
Alice Drew Chenoweth
Arthur E. Cliff
William B. Clotworthy, Jr.
W. Montague Cobb
Milton C. Cobey
Robert J. Coffey
William S. Cole
William H. Cooper
Karl C. Corley
Joseph William Costello
Frank D. Costenbader
Joseph H. Cowan
Oliver C. Cox
Darrell C. Crain
Walter F. Cresswell, Jr.
Allen S. Cross
Arcangelo R. T. D'Amore

Worth B. Daniels
Raymond O. Dart
David S. Davis
Alfred A. J. Den
Joseph Dessoff
Samuel M. Dodek
Frederick Y. Donn
Samuel Dove
George Dudas
Charles L. Dunham
W. LeRoy Dunn
Robert F. Dyer
Henry D. Ecker
Ella M. A. Enlows
Burton S. Epstein
Marion Faris
Irvin Feldman
Edward E. Ferguson
Robert A. Fischer
William D. Foote
Leslie H. French
Marvin Fuchs
George C. Gallagher
James A. Gannon, Sr.
Leon Gerber
William T. Gill, Jr.
Herbert A. Goldberg
Milton L. Goldman
Everett J. Gordon
Arnold H. Gould
Ernest A. Gould
Florence E. Grady
Sydney I. Green
Harry A. Grennan
Forest K. Harris II
John S. Hashim
James Hawfield
W. Lester Henry, Jr.
Thorval L. Hickman
Harold M. Hobart
Raymond T. Holden
Pearl B. Holly
Henry A. Hornthal
Alec Horwitz
Robert R. Hottel
Hugh O. House
Oscar B. Hunter, Jr.
Irmo P. Ingel
Norman H. Isaacson
Ruth Jackson
Paul Jaquet
Robert S. Jason
James A. Kehoe
John A. Kenney, Jr.
Elizabeth Kittredge
John J. Kuhn
David H. Kushner
Sander E. Lachman
Benjamin P. Lafsky
William C. Lambert
Zigmond M. Lebensohn
John G. Loft
Samuel D. Loube
William S. Lyons
Leland S. Madden
Paul A. Manganaro
Shelley U. Marietta
Vernon E. Martens
Richard V. Mattingly
Edward C. Mazique
Frank M. McChesney
Joseph J. McDonald
Preston A. McLendon
Arnold H. McNitt
William S. Miller
Lawrence F. Misanik
Earl H. Mitchell, Jr.
W. Ross Morris
Kenneth M. Moser
Francis J. Murray
Henry J. Myers
Esther A. Nathanson
Edward W. Nicklas
Edward M. Ohaneson
John L. Parks
Thomas M. Peery
Frank S. Pellegrini
W. Robert Perkins, Jr.
Gerald Perman
Richard B. Perry
Leonard T. Peterson
Philip H. Philbin
Hildrus A. Poindexter
Antoinette F. Popovici
John R. Portaria
Kline A. Price
Lawrence E. Putnam
Paul S. Putzki
Lawrence A. Rapee
George H. Ray
Thomas R. Rees
John A. Reisinger
Josephine E. Renshaw
Frederick A. Reuter
E. Clarence Rice
Duane C. Richtmeyer
Chalon Rodriguez
Stacy L. Rollins, Jr.
David H. Rosenfeld
William B. Russell
Charles P. Ryland
Harry Sacks
Mary K. L. Sartwell
C. Francis Scalessa
Raymond Scalettar
Frederick W. Schneider
Hans H. Schneider
Herbert Schoenfeld
Stanley A. Schwartz
Saul Schwartzbach
William H. Seward, Jr.
Francis T. Sharpe
Petrena Abbe Shea
S. Hazen Shea
Robert J. Sherman
Samuel Shwartz
Harry A. Spigel
Robert Stolar
Reuben E. Stone
Amanda L. Stoughton
Howard H. Strine
Donald Stubbs
Anna T. Swing
Norman Taub
Laszlo N. Tauber
Walter O. Teichmann
Charles W. Thompson
J. Lawn Thompson, Jr.
Russell M. Tilley
Anna Coyne Todd
Oswald V. Todd
Charles E. Townsend
Anna Marie L. Van Rooy
Felix von Mendelssohn
Bernard J. Walsh
J. Ogle Warfield, Jr.
Marc A. Weiner
David L. Weinstein
Alan M. Weintraub
Emerson A. Williams
Paul R. Wilner
Thomas A. Wilson
Harry Zehner, Sr.

Organizations

Sections of the Medical Society:
  Section on General Practice
  Section on General Surgery
  Section on Internal Medicine and Allied Subspecialties
  Section on Ophthamology
  Section on Plastic Surgery
  Section on Psychiatry
  Section on Radiology
D. C. Academy of General Practice
D. C. Association of Medical Assistants
Columbia Hospital for Women, Medical Staff
Hippocrates-Galen Society
The Jacobi Society of Washington
The Medical Arts Society of Greater Washington
Phi Delta Epsilon Graduate Club
Washington Gynecological Society
Washington Psychiatric Society

In Memoriam

Dr. Herman Hertzberg, by Mrs. Katherine Hertzberg
Dr. Jesse Thomas Mann, by Harry N. Carlton
Dr. James F. Mitchell, by Donald and Mrs. Stubbs
Dr. William Gerry Morgan, by William M. Ballinger
Dr. Joseph J. Mundell, by his family, friends, and the Georgetown Clinical Society
Dr. J. Ross Veal, by Dr. and Mrs. Stubbs

Commemorative Gifts

Dr. William Earl Clark, by the William Earl Clark Society of Gastroenterology
Mr. Theodore Wiprud, by Dr. and Mrs. Stubbs

Medicine's Responsibility Today*

JAMES Z. APPEL, M.D., F.A.C.S.

President, American Medical Association

I CONSIDER IT a very great honor to be invited to address you on this occasion. The dedication of a new building—of a new headquarters—is truly a joyous occasion. The dreamers who conceived it, who worked hard and planned carefully for it, have lived to see their dreams come true. Those who went along with various degrees of reluctance became enthusiastic as the architects, masons, electricians, plumbers and carpenters went about their work on this site. Now these architects, masons, electricians, plumbers and carpenters are gone. We are assembled within the walls of this headquarters.

Dr. Appel, AMA President and principal speaker at the Dedicatory Program

But, after all, this orderly assemblage of cinderblock, wire, pipes, etc., is an inanimate monument to the dreams and plans that have been going on these many past decades. This building can only truly become a headquarters—it can only truly become a focal point for "the promotion of the art and science of medicine and the improvement of the public health" when life is put into it. Life enters this building when the staff uses the offices and equipment; life enters this building when the membership uses its facilities.

The efficacy of the building, as represented by its materials, architectural planning, and equipment, depends on how the staff and how the membership use it. Don't let the comforts and the sophisticated equipment make you lazy.

Today, more than ever, we need an active and efficient Medical Society. The great strength of organized medicine does not lie in the American Medical Association. The full potential of the medical profession can only be realized when the State and the County Medical Societies function to their full potential.

Heretofore our role has been largely unhampered to a great extent by outsiders or third parties directing the health services of this great Nation. It was our responsibility to look after the health of the people. But our accomplishments have gone far beyond that. We have elevated the standards for medical education. We have developed and implemented a high code of medical ethics. We have stimulated research and thus made great advances in knowledge that could be applied to the care of our patients. We have wiped out, to a great extent, quackery, but, like everything else, quackery constantly raises its head and we must be constantly at war with it. We have raised the quality of care in this country to the highest in the world. Many diseases we have completely controlled—wiped out. We have promoted, perhaps slowly, mechanisms for sharing the cost of health care through insurance—health and welfare plans, etc.—as the actual cost for these services has increased.

Fully recognizing the dangers of government control—the dangers to quality, the psychological dangers, and dangers to freedom, we reluctantly, perhaps, defined the role of Government as assisting people in paying the health costs that confronted them. Yet through the years we did not move fast enough. Government had been moving slowly, at least at first, into the area of health care: the military forces, the families of the military forces, the Veterans Administration, the Government employees, etc.

This past year, 1965, I call the year of the big change-over. Congress passed 3 distinct types of national health services: first, Title XVIII, in the amendments to the Social Security Law, commonly called Medicare; second, Title XIX, in the amendments to the Social Security Law; and third, the Heart, Cancer and Stroke Law. Any or all of these could become the pattern by which the Government could finance the health care of all the people in this country. The years to come will tell which direction the social planners intend to go. They will accomplish this by gradual extension of these bills, lowering the age limits in Title XVIII, removing the means test in Title XIX, and inclusion of other diseases in the Heart, Cancer and Stroke Law. Efforts to accomplish this will be based on the need to control the high cost of medical care. Other efforts also will be made to control the profession as to what drugs it can use, how long a patient shall be in a hospital, etc.

---

*Dedicatory Address delivered before the Medical Society of the District of Columbia in its new building at 2007 Eye Street, N.W., March 13, 1966.

Not too long ago I had the occasion to hear President Johnson make the statement that the year of 1965 has been a year by which we have taken care of quantity health care. Now we must start to look into the quality of the care. My own personal belief is that the Government has not developed a very good reputation for control of quality. The medical profession has established a good reputation and is improving upon this reputation as the years go by. Once Government controls quality—determines quality—then Government has complete control of the rendition of health care. Freedom in medicine will be lost, and with the loss of freedom the profession will become a public utility.

What is the role of the State Medical Society, of the County Medical Society, or the American Medical Association? Each and every member has to work hard. They must be vigilant, and yet they must be objective in their criticism. They must be realistic. They must develop a team approach with other disciplines of the health care team. They must be citizens. They must be professionals. Unless the American Medical Association—unless the State Societies—unless the County Societies—unless the individual members operate in these fashions, Government will take over the practice of medicine.

In line with this type of program I would now beg the indulgence of those present here who attended the first National Congress on Medical Ethics, held in Chicago on March 5 of this year, and permit me to repeat briefly a portion of the talk that I gave at that Congress.

I pointed out that as we move ahead in our expanded program of medical ethics, the essential, vital ingredient is the spirit of professionalism. This we must reëmphasize and revitalize among those already in practice. And we must make a greater effort to nurture and develop it among those in the process of medical education and training.

Most of us know, but rather tend to take for granted, that a profession is primarily a calling for public service. For the conscientious doctor this involves a great deal of self-denial. The well-being of the patient comes ahead of the personal interest of the physician.

Another characteristic of a profession, in my mind, is that it is willing to accept and to exercise its responsibility of self-evaluation, self-discipline and self-evaluation of standards of quality. Our goal is to obtain maximum, individual recognition and acceptance of that responsibility.

If medicine remains true to its professional ideals, the public will have confidence in us and will not seek to protect its "interest" through politicians, by legislation, or in other ways. Conversely, to the extent that we drift away from the principle of public service, the public might develop feelings of unrest and dissatisfaction which could lead to the conversion of medicine into a new kind of "public utility."

The spirit of professionalism has been essential to human progress for centuries. Medicine has always been one of the most important segments and bulwarks of that quality in our civilization. Today, there are more professions and professional people than ever before. And the trend toward more professionalism will probably continue to accelerate as society becomes more complex.

At the same time we must bear in mind that the world is debating the question of how society should be organized. Should it be organized for the individual, with maximum freedom, opportunity and responsibility for every person, or should it be organized for the group or state, with the individual subordinate to a government which dominates and controls most social, economic and political decisions?

The spirit of professionalism, like the sense of individuality, will have a strong influence on the ultimate answer. For us in medicine, as we face the many problems and challenges that confront us, one of our major responsibilities is to stimulate and nurture a genuine sense of professionalism—professionalism as a way of life.

In this connection, *The Journal of the American Medical Association* pointed out recently that the famed scientist, Vice Admiral H. G. Rickover, reminded us last year that ours is a truly liberal and humanistic profession.

"Of all technologies," Admiral Rickover said, in his Granada Lecture before the British Association for the Advancement of Science, "that of the physician has benefited man most and harmed him least." The stringent standards set by the profession and by society for the education and professional conduct of physicians account for this happy circumstance.

"Not only is no one permitted to practice who has not given proof of his competence, but physicians must also be broadly, liberally, humanistically educated men and women. This gives them perspective in evaluating their professional actions, an ability to see these actions against a humanistic background."

As *The Journal* said, the real significance of the Admiral's remarks lies in the fact that they were not intended as tributes to the medical profession but rather as ideals for engineers in the hope that they too would find it possible "to act with the same sense of professional responsibility and service to humanity which is characteristic of good physicians."

More important than the compliments in the lecture was his emphasis on medicine's professional independence and our control of decision-making processes. This independence of professional judgment, setting us apart from technicians and making us responsible managers of technologies, is not a special privilege but an inner necessity for true professionalism, which accepts no dictates from either client or employer.

While there are some limitations on our decision-making powers resulting from various social, religious and legal values, in general we still enjoy a good measure of independence in the important areas of public health protection, individual patient care, and the subtle regions of medical ethics involving the physician-patient relationship. However, this independence of professional judgment cannot be taken for granted. "It lies," as Admiral Rickover reminds us, "in the determination of the medical profession to resist lay interference and its success in winning this point."

In my opinion, we will resist further interference and win our point only by emphasizing and maximizing the professional aspects of medicine, and by deëmphasizing and minimizing the business and financial aspects.

As individuals and as a group we must constantly bear in mind the basic principle that "the primary object of the medical profession is to render service to humanity; reward or financial gain is a subordinate consideration." This points up the sharpest, greatest difference between medicine and business.

Most people do not expect a businessman to be motivated primarily by any other desire than that of making money. If it so happens that the principles of service and altruism help him toward that goal, so much the better. However, if sharp practices and deception, within legal limits, enable him to achieve his objective more profitably, the public accepts these facts, possibly with resentment, but not with great surprise or deep feelings of betrayal. On the other hand, most people, even though they may never have seen or read any code of medical ethics, are surprisingly sensitive to the basic principles which I mentioned a moment ago. They react vindictively and with a profound bitterness arising from feelings of betrayal of a trust when they believe that a physician has placed his own financial interest ahead of the patient's welfare.

As Dr. Leonard W. Larson, Past President of the AMA, pointed out in his Inaugural Address in 1961, the professional spirit is an unchangeable force in medicine. While its outward forms and applications may change with the course of history and alterations in the human environment, its essence is unchangeable, indestructible. When the essence of the spirit is diluted or destroyed, either in an individual physician or in a nation, medicine ceases to be a profession in the highest sense of the word. Without the true professional spirit, the practice of medicine becomes simply an occupation, a way of earning a living.

The really good doctor, guided by the professional spirit, will always remember that medicine exists for just one purpose, to serve humanity, and he will strive for excellence in meeting that purpose. No matter how or to what degree the scientific and socioeconomic patterns of medical practice may change in the future, we have the responsibility of preserving and invigorating the essence of the professional spirit. That is why the American Medical Association is expanding its program in the field of medical ethics.

It occurs to me at this moment that some of you may be thinking I sound an awful lot like a preacher this evening. If so, you may gain a little comfort from the following item which recently appeared as "Today's Chuckle" in the *Chicago Daily News*: "A sermon can help people in different ways. Some rise from it greatly strengthened; others wake from it refreshed."

Blue Cross 65 and Blue Shield 65

Two new health-care plans have been developed, one by Group Hospitalization, Inc. (Blue Cross) and one by Medical Service of D. C. (Blue Shield), for persons 65 or more years of age who, beginning July 1, 1966, will be eligible to participate in Medicare.

The Plans, Blue Cross 65 and Blue Shield 65, will be offered to subscribers in the Washington, D. C. area who pay their subscription charges directly to Group Hospitalization and Medical Service instead of through a group at a place of employment. The Blue Cross and Blue Shield benefits that will be offered to the "over 65" subscribers in groups may vary from group to group, depending largely on the kind of coverage under which the group is currently enrolled.

In a joint statement, March 22, F. P. Rawlings, Jr., President of Group Hospitalization, and Dr. Henry L. Darner, President of Medical Service, said: "These programs have been developed to help persons 65 or more years of age meet some of the health care expenses Medicare will not cover. The Blue Cross 65 and the Blue Shield 65 programs will complement but not duplicate the protection offered by Part A and Part B of Medicare. The benefits, together with those offered by Medicare, provide a well rounded program of health protection to the 'over 65 age group.' "

For other than nervous and mental conditions, Blue Cross 65 benefits will be applicable to the following expenses not covered by Part A of Medicare each "spell of illness":*

- The first $40 of hospital charges.
- $10 a day toward the hospital's charges beginning with the 61st and ending with the 90th day.
- The cost of hospital care beginning with the 91st day up to the 180th day.
- The cost of hospital care beginning with the first day up to the 180th day for services rendered outside the United States and its possessions.

Blue Shield 65 will provide:

- The first $50 and 20 per cent of the balance of an amount up to the "reasonable charge" as determined under Medicare for physician services each calendar year (except home and office visits).

Mr. Rawlings and Dr. Darner recommend that persons over 65 years of age enroll in both Part A and Part B of Medicare. Enrollment in Part A, which helps to pay for hospital care and certain other health care services, is automatic for those who are receiving Social Security or Railroad Retirement benefits. Those over 65 who are not receiving such cash benefits should discuss Part A enrollment with their District Social Security Office. All persons must apply to the Social Security Administration by May 31 for enrollment in the voluntary Part B of Medicare which offers benefits to help pay doctor bills and certain other medical expense.

Literature describing Blue Cross 65 and Blue Shield 65 has been mailed to direct pay subscribers. Applications for Blue Cross 65 and Blue Shield 65 coverage will be forwarded to these subscribers about June 1. The applications of persons who apply for this coverage will be processed for an effective date of July 1. The monthly rates for an individual will be: Blue Cross 65—$2.25; Blue Shield 65—$4.55; total for both Plans—$6.80.

Benefits Offered by Blue Cross 65

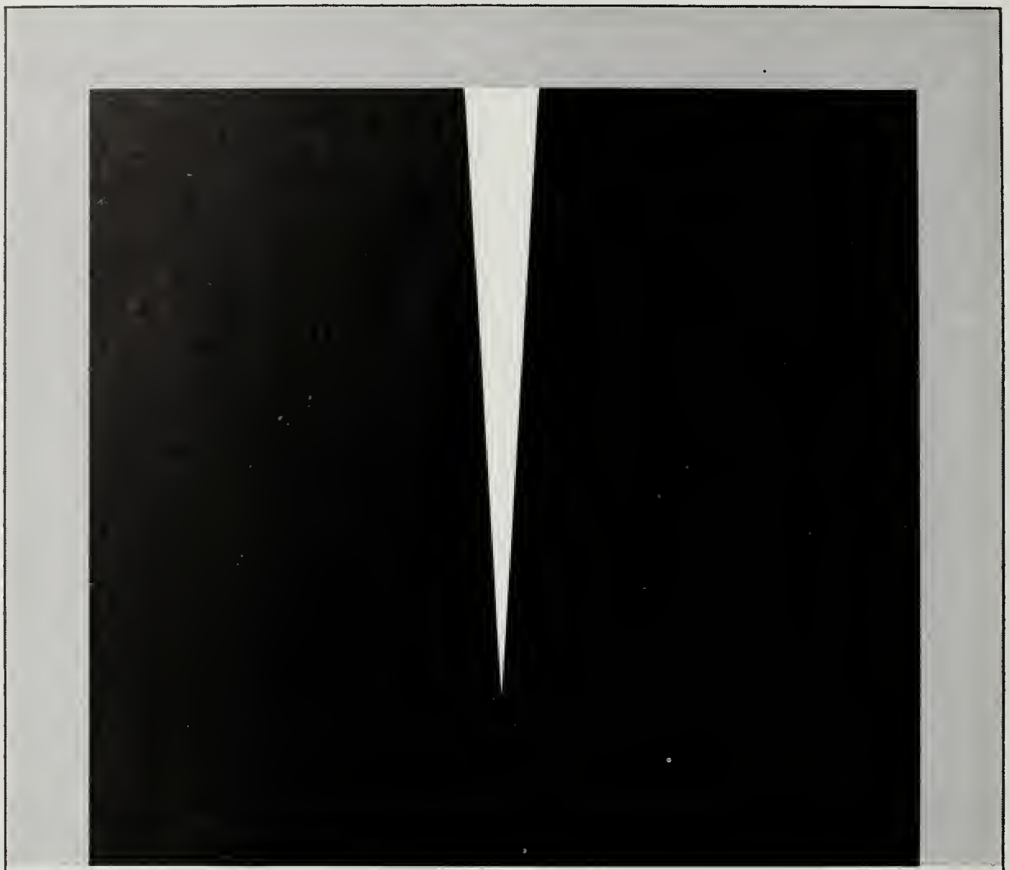
Blue Cross 65 together with Part A of Medicare will provide benefits for up to 180 days of inpatient hospital care each "spell of illness" for other than nervous and mental conditions. Blue Cross 65 benefits for such care shall not include benefits which are available to the subscriber under the Medicare program or which would be available to him if he were enrolled in that program.

In participating hospitals of Group Hospitalization, Inc. and in more than 6,000 hospitals that participate in the Blue Cross Inter-Plan Service Benefit Agreement, subscribers to Blue Cross 65 will be entitled to full coverage for the following benefits:

Semiprivate room (accommodations for 2, 3 or 4 persons)
Meals, including special diets
General nursing service
All drugs and medicines listed in the official formularies
Operating room
Recovery room
Intensive care room
Cystoscopic room
Oxygen
Use of equipment (as customarily provided by the hospital) for administering oxygen
Use of artificial heart and kidney machines (as provided by the hospital)
Dressings

---

*A "spell of illness" begins on the first day the subscriber receives covered services as an inpatient. It ends after the subscriber has been out of a hospital for 60 consecutive days. He may be discharged and readmitted several times during a spell of illness but a new spell of illness cannot begin until he has been out of a hospital for 60 consecutive days.



incisive

A good way to describe 'Stelazine'. It's different from the tranquilizers that sedate and dull your anxious patients. Its antianxiety effect is direct. On 'Stelazine', your patients can be calmed yet remain alert.

And 'Stelazine' offers additional benefits. Dependence has not been reported. At low doses, side effects are minimal. Its b.i.d. dosage is convenient and economical.

Stelazine®
brand of **trifluoperazine**

Indications: Symptoms of excessive anxiety. *Contraindicated* in comatose or greatly depressed states due to CNS depressants and in cases of existing blood dyscrasias, bone marrow depression and pre-existing liver damage. *Principal side effects,* usually dose related, may include mild skin reaction, dry mouth, insomnia, fatigue, drowsiness, dizziness and neuromuscular (extrapyramidal) reactions. Muscular weakness, anorexia, rash, lactation and blurred vision may also be observed. Blood dyscrasias and jaundice have been extremely rare. Use with caution in patients with impaired cardiovascular systems. Before prescribing, see SK&F product Prescribing Information.

Smith Kline & French Laboratories, Philadelphia

SK&F

COMPLETE
INVESTMENT SERVICE

FERRIS & COMPANY

Members New York Stock Exchange
611 Fifteenth St. N.W.
STerling 3-8222

Plaster casts
Sterile tray service
Intravenous solutions and injections
Sera (except blood, blood plasma and blood expanders)

If a private room is occupied, the subscriber will be entitled to a credit equivalent to the hospital's charge for its most prevalent semiprivate accommodations.

For services rendered in nonparticipating hospitals (either inside or outside of the United States) Blue Cross 65 will cover 85 per cent of the hospital's charges.

For mental or nervous disorders, Blue Cross 65 will, under most circumstances, cover only the $40 deductible.

The subscriber will also be entitled to Blue Cross 65 benefits for outpatient hospital care for emergency first aid within 72 hours after an accident and for use of the operating room for minor surgery.

Benefits Offered by Blue Shield 65

Each calendar year Blue Shield 65 will pay the first $50 and 20 per cent of an amount up to the "reasonable charge" determined under Medicare for the following services (when services are rendered by a physician as defined by Medicare):

Surgery
Administration of anesthetics
In-hospital medical visits to a hospitalized bed patient (including intensive care visits and consultations)
Diagnostic laboratory and radiological procedures
Endoscopies
Electroshock therapy
Radiation and isotope therapy
Emergency first aid service

The benefits of the Blue Shield 65 contract apply only to the physicians' services listed above in this paragraph and only when such services constitute allowable expenses in the determination of Medicare benefits, whether or not the subscriber is enrolled under Medicare.

"Good Samaritan" Law for D. C.

On November 2, 1965, Public Law 89-341, "An Act to Relieve Physicians of liability for negligent medical treatment at the scene of an accident in the District of Columbia" was passed. The purpose is to relieve physicians and others designated from liability for civil damages for any act or omission, not constituting gross negligence, upon rendering voluntary and free medical treatment at the scene of an accident or other emergency outside a hospital.

The Law reads: "Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that no physician licensed to practice medicine or osteopathy in the District of Columbia or in any state, shall be liable in civil damages for any act or omission, not constituting gross negligence, in the course of such physician or nurse rendering (in good faith and without expectation of receiving or intending to seek compensation) medical care or assistance at the scene of an accident or other medical emergency in the District of Columbia and outside a hospital."

Although it was the recommendation of the Medical Society that the phrase, "not constituting gross negligence" be omitted since even these words imply that suit may be instituted if "gross negligence" is contended, it was the opinion of both House and Senate that no Good Samaritan Law should accord anyone relief from liability from wrong-doing. The effect, therefore, because of the special circumstances under which medical care or assistance is rendered, is to require a party in a law suit against a physician to prove gross negligence rather than ordinary negligence, as is generally required.

In the House version of the bill the term "physician" includes doctors of osteopathy but no other medically-oriented or paramedical personnel. The Senate Amendment included registered nurses, therefore affording protection from civil suit for not only physicians but doctors of osteopathy and registered nurses.

The enactment of the law is in the public interest and benefits not only the aiding physician or nurse but also the victim, in that medical assistance will be more readily available when needed and the person rendering charitable assistance will be relieved from unwarranted liability.

Health Dept. Notes

The Urban Environment and Health

There are now in the United States only 68 million persons who live in rural areas, while approximately 124 million live in urban, metropolitan areas.

The meaning of this has not been lost among political scientists, who must gauge the role of the city in planning for jobs, housing, highways and schools. Nor must it be lost on the public health and medical professions, who develop programs and services to meet the needs of present and future urban residents.

Clearly, man's immediate environment is a determining factor in his mental and physical health.

Of course, physicians who practice in metropolitan areas such as Washington are aware of the impact of urban living and the pressures which exert their influences on modern man. They see patients whose otherwise minor physical ills may be aggravated by the pace of their lives, a pace often set by urban living. They see other patients whose entire illness may be psychosomatic and traceable to their being city-dwellers.

This may be considered undesirable; yet the unrelenting trend of living, in the United States and throughout the world, is away from the relaxed countryside to the crowded, hectic urban scene.

We may think this is happening only in America. But it is occurring at an even greater rate in many other nations, some of them poorly equipped to meet the demands of a rural-turning-urban population who have left the land to seek their fortunes in the city.

Physicians who have traveled in recent years to Latin America, Asia, and the African continent will recall the massive problems of overpopulation which cities there are facing: inadequate, often nonexistent housing, with families jammed into shacks and shanty-towns; methods of food distribution which fail at the outset and permit near-starvation and malnutrition; water supply and sewage-disposal systems in name only, with frequent intermingling producing enteric diseases. These are public health problems in extremis.

The conditions which American cities face are different. We are a younger nation; our cities are more recent in origin and therefore reflect more recent knowledge; our public health problems are more sophisticated. In some way we seem to have avoided or resolved the basic health problems of many world cities.

Our problems are no less real, however, and the dominant consideration is this: The modern American city is a man-made, artifical environment. There is cement rather than earth underfoot; there are brick and concrete walls around us. Overhead, there may be a patch of blue and sunlight, unless smog has placed its ceiling above us. We have boxed ourselves in on all sides and invite collective, incipient claustrophobia.

If this is an artificial environment, then it may also produce an artificial way of life. In this crowded, sometimes hostile, yet self-made situation, it is little wonder that persons become alcoholic, chronically ill, depressed, and socially irresponsible. The closeness of city living permits an easier transfer of physical disease and mental moods and attitudes. Its apparent anonymity permits asocial activity which would come under scrutiny in a rural society.

But against these difficulties must be set the advantages the urban community allows. The opportunities are larger; there is more to be had in culture, leisure, employment, and education. Polluted air can be cleared and its recurrence avoided. A polluted river can be cleaned and made useful to the city-dweller; the dirt, noise, traffic and confusion can be replaced with conditions more suited to human needs.

Man invented the city to meet what he thought were his requirements. That it may not have served these needs tells more about man than about his invention, the city.

We must learn to live with and in the city, making it the healthful environment that it can become, because the city is likely to be our habitat throughout our lives and that of our children.

Murray Grant, M.D., D.P.H.
D. C. Director of Public Health

A Symbol
to Support...

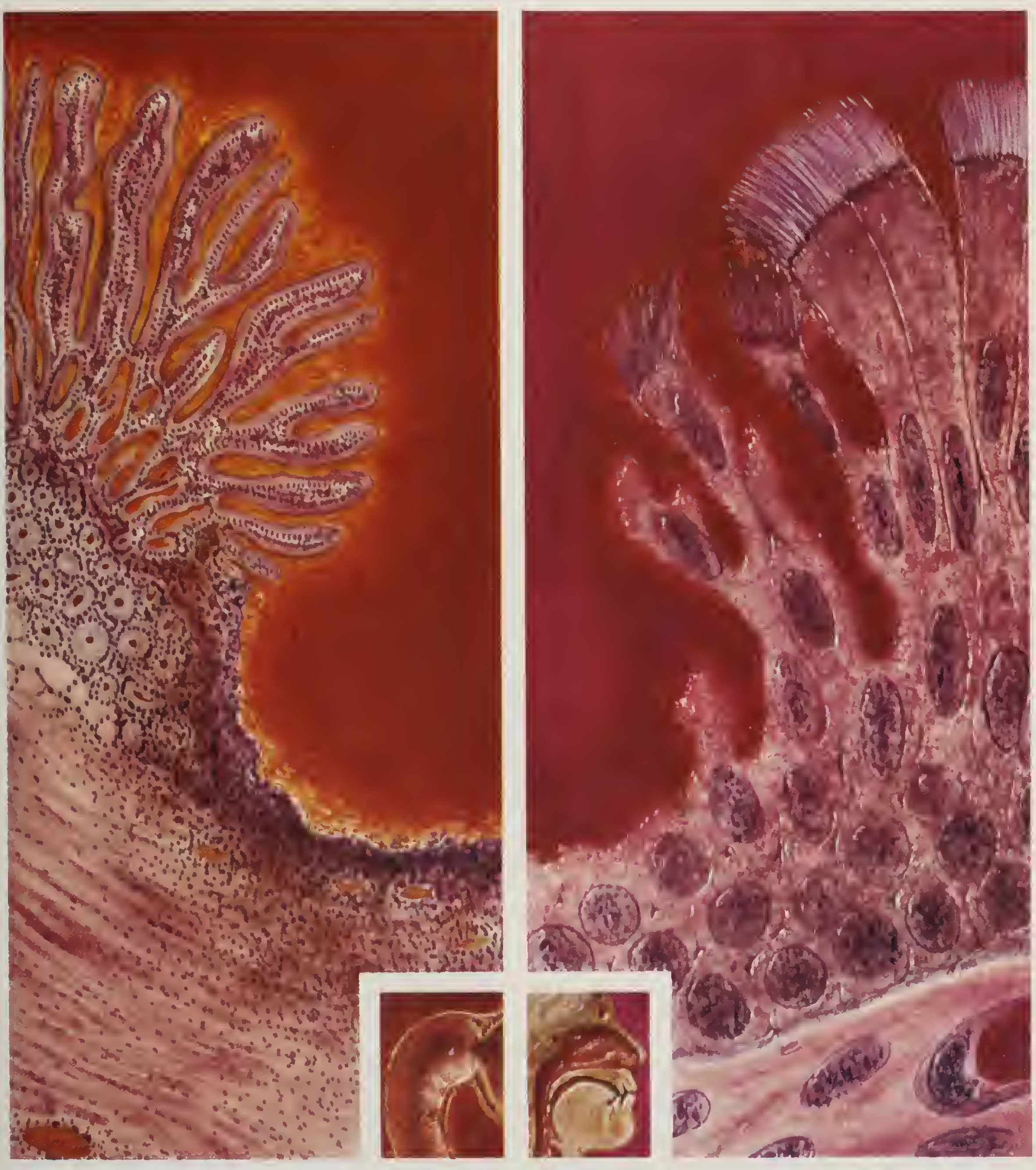
AMA-ERF

American Medical
Association — Education
and Research Foundation
535 N. Dearborn St., Chicago 10, Ill.

spring 1966

DORSEY Season

A journal within a journal published quarterly in the interests of better medicine by Dorsey Laboratories, a division of The Wander Company, Lincoln, Nebraska. Address communications to Raymond C. Pogge, M. D., Director of Medicine.



Duodenal mucosa with ulcer crater—
Approx. 80× Magnification.

Loosening epithelial cells of nasal mucosa during early stage of cold—Approx. 1800× Magnification.

this issue: partners in misery

partners in misery: common cold and duodenal ulcer*

a century or two ago our forefathers believed that the common cold was caused by an excess of evil humors. Today we regard these baleful humors as a result of the cold rather than its cause. Only in the last ten years have some of the offending viruses been cultivated, and we now know many others can be transmitted to human volunteers although they cannot yet be grown in the laboratory. Various body defenses react to infection by a virus, and in the respiratory tract the lung is protected by the phagocytic properties of the pulmonary alveolar macrophage.[1]

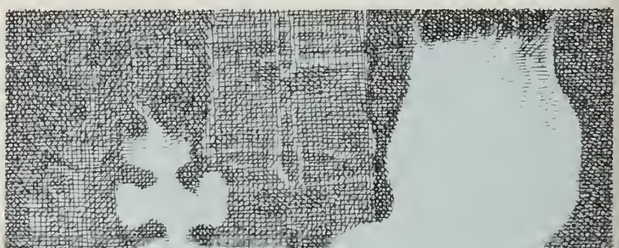
Because of the brief history and large proportion of unidentified viruses, effective prophylactic vaccines have not yet appeared. A universal antiviral agent seems even more remote. Meanwhile, these viruses continue to produce epidemics of upper respiratory infection at seasonal intervals, particularly in spring, fall and winter, during which they propagate and distribute progeny indiscriminately. As a result, they are responsible for significant work loss. Since the immunity afforded is temporary, recurrent infections are common.

This recurrent morbidity in spring and fall is shared by duodenal ulcer, itself a cause of significant loss in wages and medical expense. Thirty years ago Emery and Monroe reported 1,279 recurrences of peptic ulcer of which 13 per cent could be attributed to upper respiratory infection, thus confirming a long-held clinical impression.[2] While the inflammation, congestion and secretion of the mucosa of the nasopharynx in the common cold, and the hyperemia and hypersecretion of the gastric mucosa during acute exacerbation of a duodenal ulcer may not be directly linked, it is probable that the miseries of the infection are reflected in the pain of the ulcer. The following case history illustrates this point.

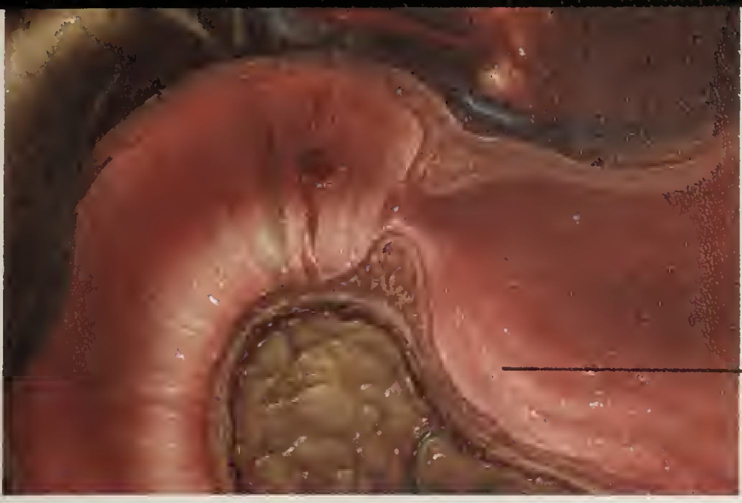
Case report A 48 year old white male executive, suffering from hematemesis and melena for 12 hours was admitted to hospital on April 8, 1965. He gave a history of duodenal ulcer proved by x-ray studies 23 years previously. In the intervening years he suffered from typical epigastric pain occurring two hours postprandially, usually for two or three weeks each spring and fall. A hospital admission two years earlier had followed hematemesis of moderate amount.

The present admission was preceded by a recurrence of pain during a period of unusual business pressure. In addition he caught a cold one week before his entry to hospital and his already irregular eating habits were made more so by loss of taste and appetite, blocked nose and general malaise. During the final 36 hours he used aspirin to relieve his cold, taking 2 or 3 tablets with a glass of water on 6 or 7 occasions. Before retiring he drank a glass of hot toddy.

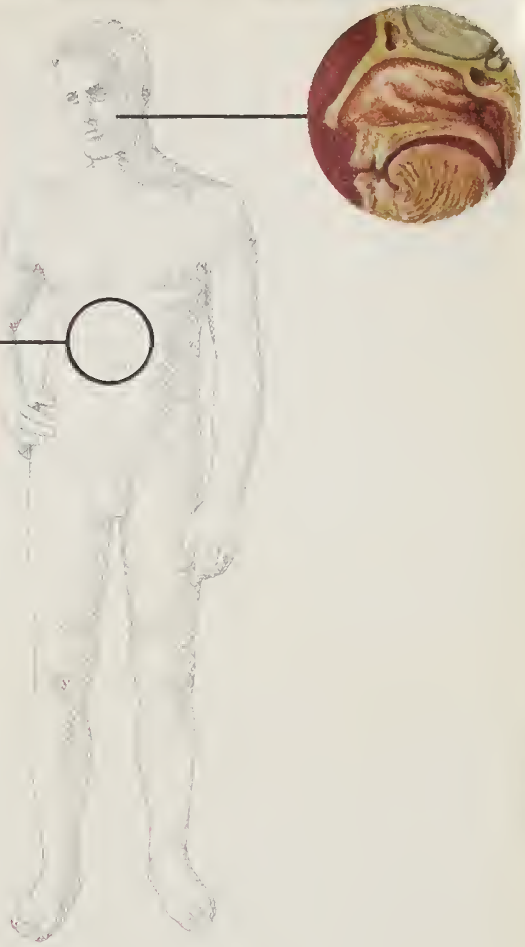
He awakened about 1 a.m. and vomited dark red blood and recently ingested food mixed with whisky. Melena followed and he was transferred to hospital. On admission he was pale, cold and sweating. Apart from epigastric tenderness and black stool on the examining finger after rectal examination, his general physical examination was not remarkable. Temperature was normal, pulse was thin and thready with a rate of 114 beats per minute, and blood



The commonly found "clover-leaf" roentgenographic abnormality of chronic duodenal ulcer due to spastic contractions and scarring.



Typical site of duodenal ulcer showing anatomical relationship to gastroduodenal artery and common bile duct.



pressure measurement was 104/60mm. of mercury. Hemoglobin estimation was 8.6 grams per cent, but white blood count, chest x-ray and urinalysis were within normal limits. No further bleeding occurred. After blood transfusions and a suitable medical regime he was dismissed two weeks later and advised to return later for consideration of surgery.

The care of the ulcer patient suffering from a viral infection of the upper respiratory tract is additionally handicapped by the local and constitutional symptoms so produced. Indifference to food often makes it difficult to "feed a cold" even in a patient without an ulcer. In the ulcer patient this becomes more than a homily, for malaise and apathy towards irksome routine produce a lack of interest in adhering to an ulcer program and result in its eventual failure if these symptoms are not relieved. The absence of curative treatment for these viral infections has spawned many a strange therapeutic offspring and some of the more generally accepted remedies contain a special risk for the ulcer patient.

To the gastric physiologist, the shot heard around the world was not fired at Concord but was discharged through the stomach of Alexis St. Martin. The worthy voyageur had a more than modest thirst and on several occasions William Beaumont observed through the resulting fistula the changes of gastritis which followed an immoderate ingestion of alcohol.[3] It is now well known that alcohol stimulates the production of gastric juice and the patient with an ulcer, even in remission, should not drink alcohol without first taking food, milk or antacid. The use of various alcoholic remedies for the common cold is to be strongly discouraged in this type of patient. Factors already present can produce an acute exacerbation of ulcer symptoms without the added stimulus of alcohol.

Headache and facial pain, sore throat and generalized aching are subjective discomforts of viral infections of the upper respiratory tract or their complications. Relief from them is usually sought in the family medicine cabinet, and of all the medications habitually stored there, salicylates are the most frequently used. Oral ingestion of salicylates has produced

I can taste, Doctor!

On Sippy diet or unrestricted regimen, food tastes better to the patient with a cold when you prescribe the oral decongestant

Triaminic® *tablets*

Each timed-release tablet contains:

Phenylpropanolamine hydrochloride	50 m
Pheniramine maleate	25 m
Pyrilamine maleate	25 m

One tablet on arising, in midafternoon and a bedtime assures round-the-clock relief. Yo may occasionally encounter these side effect drowsiness, blurred vision, cardiac palpitation flushing, dizziness, nervousness or gastrointe tinal upsets. Precautions: the possibility o drowsiness should be considered by patient engaged in mechanical operations requirin alertness. Use with caution in patients with h pertension, heart disease, diabetes, or thyroto icosis.

(Advertisemen

substernal pyrosis and sometimes epigastric pain in susceptible individuals. Bleeding from erosions of the gastric mucosa has followed their use and has been severe
ough in some instances to cause hematemesis and
elena.[4] It has been suggested that interference
ith the protective mucous layer of the stomach
lows this to happen. There is no evidence that
persecretion occurs, but the taking of aspirin has
en followed by exacerbation of ulcer symptoms
d occasionally by gastrointestinal bleeding.[5] The
cer patient with a cold should take salicylates with
antacid, or preferably other means of sympto-
atic relief should be found.

ffeine has two actions on gastric secretion. One
rectly stimulates production of acid and the other
tentiates the out-pouring of gastric juice as a
sponse to other stimuli.[6] In high doses to animals,
has produced erosive gastritis and peptic ulcera-
n. Caffeine-containing beverages are discouraged
r the ulcer subject and forbidden during an acute
acerbation.[7] Many cold remedies contain caffeine.

sufferers from allergic rhinitis springtime brings
mptoms of nasal obstruction, loss of taste and
ell and malaise similar to those caused by viral
fection but due instead to allergens which at that
ne of year are principally tree pollens. Relief from
ese symptoms can be obtained, though not wisely,
the use of steroid medication. Unfortunately,
ronic sufferers from these allergies have used this
proach with varying degrees of success. Steroid
rmones increase gastric secretion and delay the
aling of experimental ulcers.[8,9] Clinically their
lministration has been associated with reactivation
healed duodenal ulcers, and with bleeding and
rforation which were not always preceded by
pical ulcer distress. Because of these harmful
fects, their use in the ulcer patient is best avoided
r other than serious medical problems and then
ly with adequate antacid coverage.

mming up It is immaterial by which pathways
e malaise and lassitude, depression and irritability
tivate an ulcer, but it is the physician's responsi-
lity to ensure that the medications he selects to
lieve the symptoms of a cold do not further aggra-
te the ulcer.

references

1. Divertie, M. B. and Brown, A. L., Jr.: The Pulmonary Alveolar Macrophage. Med. Clin. N. Amer. 48:1049-1054, July, 1964. 2. Emery, E. S., Jr. and Monroe, R. T.: Peptic Ulcer: Nature and Treatment Based on a Study of 1,435 Cases. Arch. Int. Med. 55:271, 1935. 3. Osler, W.: Experiments and Observations on the Gastric Juice and the Physiology of Digestion by William Beaumont, M. D. XIII Internat. Physiol. Congress. Boston, Massachusetts. pp. 280, 1929. 4. Leonards, J. R.: Aspirin and Blood Loss From the Gastrointestinal Tract. Fed. Proc. 21:452, 1962. 5. Kossover, M. F. and Kaplan, M. H.: The Role of Salicylates in Massive Gastrointestinal Hemorrhage. Am. J. Gastroenterology. 35:445-455, 1961. 6. Roth, J. A. and Ivy, A. C.: Synergistic Effect of Caffeine on Histaminic Response. Am. J. Physiol. 142:107, 1944. 7. Musick, V. A., Avey, A. T., Hopps, H. C. and Hellbaum, A. A.: Gastric Secretion in Duodenal Ulcer in Remission; Response to the Caffeine Test Meal. Gastroenterology. 7:332, 1946. 8. Kahn, D. S., Phillips, M. J. and Skoryna, S. C.: Healed Experimental Gastric Ulcer in the Rat; Re-Ulceration Resulting from Cortisone Administration. Amer. J. Path. 38:177-187, 1961. 9. Chaikof, L., Janke, W., Pesaros, P. C., Ponka, J. L. and Bush B. E.: Effects of Prednisone and ACTH on Gastric Secretion. Arch. Surg. 83:32-39, 1961.

*Author's name on request.

like magic!

for seasonal colds
and nasal allergies
Triaminic® *syrup*

Each teaspoonful (5 ml.) contains:
Phenylpropanolamine hydrochloride .... 12.5 mg.
Pheniramine maleate .... 6.25 mg.
Pyrilamine maleate .... 6.25 mg.

For nasal congestion regardless of cause, you can bring quick, lasting relief. Magic? Perhaps so to your little patients. To you, it's sound therapy. You may occasionally encounter these side effects: drowsiness, blurred vision, cardiac palpitations, flushing, dizziness, nervousness or gastrointestinal upsets. Precautions: the possibility of drowsiness should be considered by patients engaged in mechanical operations requiring alertness. Use with caution in patients with hypertension, heart disease, diabetes, or thyrotoxicosis.

Over 185 million doses prescribed

(Advertisement)

Free Red Cross Courses in Home Care

With more and more physicians and nurses being called for active duty in the Armed Forces to serve in Viet Nam as well as in military hospitals in this country, it is important for patients and their families to become as self-reliant and knowledgeable as possible.

The District of Columbia Chapter, American Red Cross, offers several nursing courses that can be a boon to the busy, and often harrassed doctor in the Nation's Capital. For the courses, given without charge, day and night, are planned to prepare patients and their families to cope with long-term illness in the home and emergencies by giving them the skill to follow the doctor's instructions.

There are 3 basic courses, "Home Care of the Sick and Injured," "Expectant Parents," and "Adoptive Parents."

A 12-hour course in "Home Care of the Sick and Injured" teaches simple home-nursing skills and stresses the principles of good nursing care. The nurse-instructor teaches proper positioning of the patient, the necessity of keeping accurate records of symptoms and treatment, dangers of self-medication, and the proper handling of medication prescribed by you, the doctor. The student is taught to read a thermometer accurately, give a bed bath and a skillful back rub, and how to improvise inexpensive sickroom equipment. For example, the men and women students are taught to make back rests from cardboard boxes, a set of bed lifts from tin cans, and bed jackets with towels.

A Red Cross course for "Expectant Parents" is available day and night. In the 12-hour course, parents-to-be discuss a variety of subjects ranging from prenatal diet to plans for the postpartum period at home. Every aspect of the hospital stay is covered, including the preadmission form and the proper door to enter, as well as labor and delivery. Bottle- and breast-feeding for the baby is discussed. Fathers-to-be who take this course know where the hospital is and how to get there and the significant information needed before they disturb your rest with a 2 a.m. panicky call. By working with dolls, expectant parents also learn how to bathe and diaper the baby, how to hold and burp the infant, and other essential facts. The course also attempts to relieve anxieties about labor and delivery.

A new course for "Adoptive Parents" is tailored to meet the particular needs of men and women who adopt babies. These classes, which emphasize the care of the baby instead of labor and delivery, are taught in 4 sessions instead of 6.

All the American Red Cross nursing courses emphasize planning and close coöperation with the doctor. They can eliminate many minor details and free the physician from unnecessary, time-consuming explanations and instructions.

Most of these courses are taught at the D.C. Chapter House, 2025 E Street, N.W. However, if you would prefer to have your patients take these classes in your office outside of office hours, the Red Cross has instructor courses available for your nurses. Once authorized as instructors, they will be able to teach your patients under your supervision and award Red Cross certificates upon completion. Because all the courses are given without charge, they are available to anyone who has the time and desire to take them.

Ruth R. Woods, R.N.
Director of Nursing Services, District of Columbia Chapter, American Red Cross

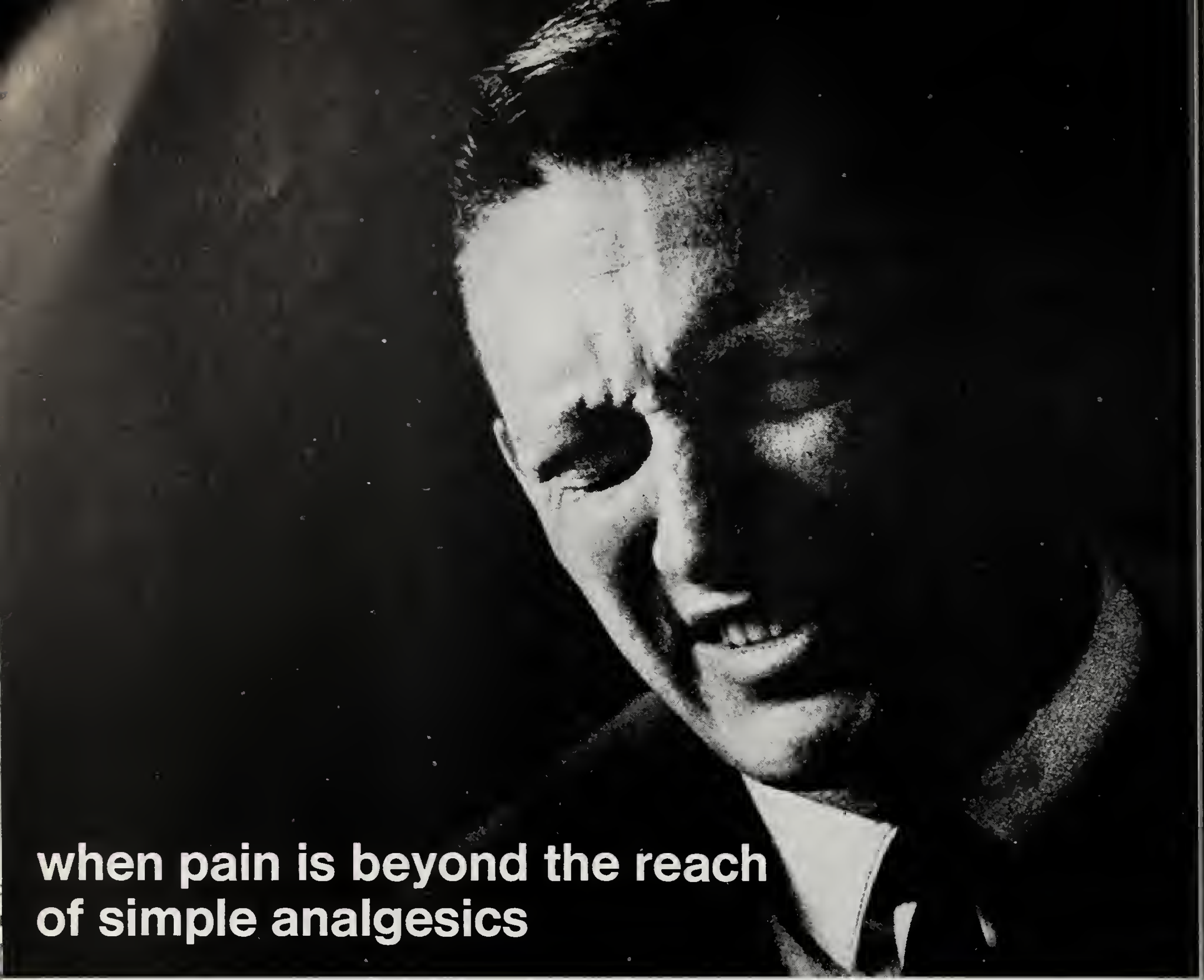
Patients with Wiskott-Aldrich Syndrome Needed for Clinical Center Study

The coöperation of physicians is requested in a study of patients with Wiskott-Aldrich syndrome being conducted by the Metabolism Branch of the National Cancer Institute at the Clinical Center of the National Institutes of Health in Bethesda, Md.

Wiskott-Aldrich syndrome is an affliction of infants and young children characterized by chronic eczema, thrombocytopenia, hemorrhagic diatheses, and susceptibility to infections. Patients with this syndrome will be admitted for study of their immune status in general and their immunoglobulin metabolism in particular. Full reports of studies done will be made available to the referring physician.

It would be appreciated if 1 ml. of serum could be sent for quantitative determination of immunoglobulin levels on those patients with this syndrome who are unable to come to the National Institutes of Health.

Interested physicians may write or phone Dr. Thomas A. Waldmann, Clinical Center, Room 4-N-110, National Institutes of Health, Bethesda, Md. 20014; telephone: 656-4000, Ext. 66480.



when pain is beyond the reach
of simple analgesics

In the management of mild to moderate pain, give your patients comprehensive relief. TRANCO-GESIC extends the range of usefulness of aspirin by dimming pain perception—and *also* reducing mental and muscle tension.

TRANCO-GESIC®
tablets
chlormezanone 100 mg. with aspirin 300 mg.

subdues the major contributors to pain:

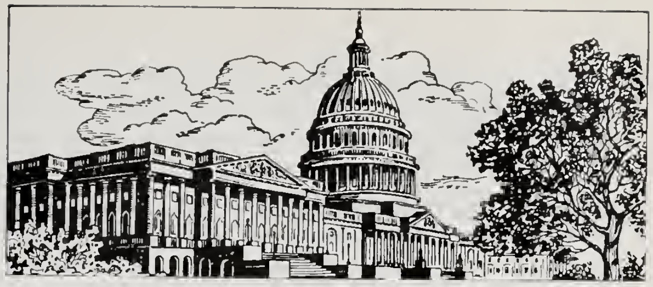
- pain perception
- mental tension
- muscle tension-spasm

TRANCO-GESIC is so well tolerated it can be prescribed for anyone who can take aspirin. It is non-narcotic, and free from dangers of addiction, habituation, or dependence. TRANCO-GESIC is effective in all types of mild and moderate pain. Of 862 patients who were treated with chlormezanone and aspirin for various disorders, 88% reported excellent or good pain relief.[1]

Side effects have been minor. Occasionally gastric distress, weakness, sedation or dizziness occur. Reversible cholestatic jaundice has been reported on rare occasions. However, in 4,653 patients treated with chlormezanone, 97.7% had *no* side effects.[1] *Contraindication:* just one: sensitivity to aspirin. *Dosage:* Adults, usually 2 tablets three or four times daily. Children (from 5 to 12 years), 1 tablet three or four times daily.

1. Collective studies, Department of Medical Research, Winthrop Laboratories.

Winthrop WINTHROP LABORATORIES, NEW YORK, N. Y. 10016



NEWS & PERSONALS

Summary of Executive Board Actions

Proceedings of February 28 Meeting

The Executive Board of the Medical Society of the District of Columbia met for dinner at 6:30 p.m. in the Exhibit Hall of the Society's headquarters, February 28, 1966. Dr. J. Spencer Dryden, Chairman, presided over the meeting which followed in the Board Room. Present were Drs. C. Willard Camalier, Jr., Henry D. Ecker, Claudine M. Gay, Raymond T. Holden, Edward W. Nicklas, Lawrence A. Rapee, Paul R. Wilner, and Mr. George W. Cooley, Secretary.

Committee Meetings: The following committee meetings were reported by the Secretary as having been held since the last Board meeting:

January	27	Traffic Committee
February	9	Board of Credentials
	11	Fee Review Committee
	14	Committee on Mental Health
	15	Committee on Dedicatory Program
	15	Medicolegal Problems Committee with representatives of the St. Paul Insurance Companies
	15	Grievance Committee
	16	Committee on Occupational Health
	17	Liaison Committee with Public Health Department
	17	Committee on Medical Aspects of Sports and Physical Fitness
	18	Liaison Committee with Medical Schools and Hospitals
	21	Relative Value Study Committee
	23	Insurance Committee
	24	Traffic Committee

Board of Credentials: On recommendation of the Board of Credentials, the Board approved the following applicants for membership and changes in membership status:

Active Members

Palma Abraham, 8309 Fenway Road, Bethesda, Md.
William H. Barton, 2123 13th Street, N.W.
William Brown, Jr., 1210 Mapleview Place, S.E.
Philip C. Brunschwyler, 2121 Pennsylvania Avenue, N.W.
Dorothea R. Johnson, 2055 L Street, N.W.
Jerome O'Connell, 1500 Forest Glen Road, Arlington, Va.
Charles H. Troshinsky, 3246 P Street, N.W.

Associate Members

Dara S. Afshar, Sibley Hospital
James C. Bulger, 1801 Eye Street, N.W.
Ruben D. Cabrera, 730 24th Street, N.W.
Eugene R. Jacobs, National Orthopedic and Rehabilitation Hospital, Arlington, Va.
David I. Kabir, Howard University College of Medicine
Yuksel Uzer, 8110 Greeley Blvd., Springfield, Va.

Resident-Intern Member

Albert Greenfield, Washington Hospital Center

Resignations

Associate: Morton D. Berkow, Blaine H. Eig, and G. Lennard Gold

Reinstated to membership upon payment of 1965 dues were:

Active: David C. Hinton, Arthur F. Passarelli, James E. Roberts, Luther D. Robinson, Robert C. Rush, Daniel B. Washington, and David H. Weaver
Associate: John T. Lynn
Resident-Intern: Leon Rand

Summary of Membership, 1965: The Secretary reported that as of January 1, 1966 the total membership of the Society was 2,435 as compared to 2,363 on January 1, 1965.

New Headquarters Progress Report: The Secretary reported that the Occupancy Permit had been received and included all floors of the new headquarters. He submitted a list of the various organizations that wanted to use the building and those which should be charged. It was agreed that the Secretary should use his discretion in this matter, automatically omitting charges for the Sections, the local chapter of the

American Association of Medical Assistants, the Woman's Auxiliary, and the Doctors' Symphonetta. Charges for someone to guard the door evenings and weekends will be by individual determination. The Doctors' Symphonetta had requested the use of the Exhibit Hall on Sunday afternoons, which is agreeable with the Executive Board.

The Secretary reported that as of this date the insurance carriers had insisted that no charge be made for parking, since this would make the garage a public parking space, requiring a permit from the City and attendants. For the time being parking is restricted to staff members of the Medical Society, at the discretion of the Executive Director, and to member physicians attending meetings or having business in the building.

A Subcommittee of the House and Building Fund Committee reported on a special insurance policy on the building, contents, etc. which is being prepared by Russell, Marsh & Kennedy, Inc.

Dr. Nicklas reported on the arrangements being made for the Dedication Ceremony and copies of the invitation were distributed. A number of suggestions were made in reference to individuals who should be invited.

The Secretary pointed out that the money for permanent financing had not been obtained and therefore it was necessary to obtain additional funds from the Union Trust Company to pay off the $230,000 plus interest due February 26 and to complete whatever payments are necessary to the contractor and architect. The Board authorized the Secretary-Treasurer and the Chairman of the Board to borrow from the Union Trust Company whatever funds are required prior to obtaining a long-term loan.

Report on Low-cost Drug Study Program: The results of a survey to secure data on the use of drugs in rheumatic heart disease were submitted to the Executive Board. These data will be used by the Committee on Liaison with the Department of Public Health in reviewing a low-cost drug program proposed by the Health Department.

Income and Estate Tax Program: The Secretary reported that a note had been placed in the *Newsletter* in reference to a proposed program on Income and Estate Taxes. The response to date showed 70 individuals indicating an interest. The President was given approval to proceed with such a program, if he so desires.

Relative Value Study: The Secretary read 2 letters requesting an open special meeting of the Medical Society to discuss this item of business. One letter was from Frank J. Sanzaro, Secretary of the Section on General Surgery, and the other from Mary Lou Barker, Chairman of the Section on Anesthesiology. It was voted that the President call a special meeting of the Society for the purpose of discussing 2 questions:

1. Does the Society wish to change or reaffirm the policy adopted in 1959 authorizing a Relative Value Scale of the Medical Society of the District of Columbia?

2. If the Society wishes to reaffirm this policy, does it approve the Relative Value Scale as revised by the Relative Value Study Committee and approved by the Executive Board with the provisions made for revision consideration by that Committee?

The Chairman of the Board and the President were authorized to confer with the Secretary as to the best date for such a meeting.

Committee on Occupational Health: The Board approved the recommendation of the Committee on Occupational Health that it submit to the representatives of the Washington Claims Managers' Council the newly adopted Relative Value Schedule of the Medical Society as a base for determining payment for services performed by those physicians engaged in practice under the Workmen's Compensation Law.

Committee on Medicolegal Problems: The Secretary submitted a report from the Committee on Medicolegal Problems which concerned a proposed 16 per cent overall increase in professional liability rates for 1966–67. After discussion concerning this method of increasing the rates, rather than attaching the increase to the individual classifications whose experience ratings make necessary such an increase, it was voted to approve the Committee's recommendations for an overall 16 per cent rate increase and so notify the membership.

Student American Medical Association: Approval was given to a request received from S.A.M.A. Headquarters in Chicago that this Society Coöperate with that organization in a program to be held in Washington in the spring of 1967. This is one of a series of programs concerning planning and financing of medical careers being co-sponsored by other medical societies.

Morris Cafritz Memorial Hospital: The Secretary reported that the Board members are invited to the opening of this hospital, March 9, 1966 at 12:30 p.m. The location is 1310 Southern Avenue, S.E., Washington, D. C.

Miscellaneous Business

Recommendations of the Insurance Committee for a Group Life Insurance Program for Society members were approved and the Committee authorized to proceed to seek the 450 members necessary to put the program in operation.

It was reported that Mr. John Troan is leaving this area for a position elsewhere. The Secretary was instructed to write him a letter expressing the Society's appreciation for his careful attention to facts in reporting on medical news and Society activities.

Dr. Rapee suggested that some of the older members be approached concerning the possibility of obtaining old and valuable books and medical items for the Exhibit Hall. This matter was referred to the House and Building Fund Committee.

P.L. 89-239 (Heart, Cancer, Stroke and Related Diseases): It was voted to notify the Committee on Regional Medical Programs that it is the consensus of the Executive Board that the Medical Society of the District of Columbia take the leadership in developing and establishing an advisory council as provided for in the law and to seek the coöperation of all other organizations and agencies concerned.

There being no further business the meeting was adjourned.

Proceedings of March 28 meeting

The monthly meeting of the Executive Board, March 28, in the Board Room of the new Society headquarters began at 7:30 p.m. Dr. J. Spencer Dryden, Chairman, presided. Present were Drs. C. Willard Camalier, Jr., Robert J. Coffey, Karl C. Corley, Henry D. Ecker, Claudine M. Gay, Raymond T. Holden, Edward W. Nicklas, Lawrence A. Rapee, Paul R. Wilner, and Mr. George W. Cooley, Secretary. Also present were Dr. Darrell C. Crain, Dr. Frank S. Bacon, and Mr. Warren Magee, the Society's legal counsel.

The minutes of the February 28 meeting were approved with the following amendments: That the Executive Board approved Honorary membership for Mr. Renah F. Camalier for his services in expediting the completion of the new Society headquarters (a Certificate of Membership was presented to him at the Dedication Ceremony, Sunday, March 13, 1966) and also to show that the Executive Board approved the presentation of a certificate to the Executive Director, Mr. George W. Cooley, "in grateful appreciation of his untiring efforts in the planning, creation, and supervision of the erection of the new Medical Society headquarters."

Committee Meetings: The following committee meetings were reported by the Secretary as having been held since the Board last met:

March	4	Fee Review Committee
	7	Committee on Hospital Utilization
	8	Committee on Public Information and Education
	9	Committee on Regional Medical Programs
	9	Board of Credentials
	10	Liaison Committee with the Public Health Department
	10	Medical Bureau Committee
	11	Committee on Physician Placement
	15	Grievance Committee
	17	Committee on Sports and Physical Fitness
	18	Committee on Occupational Health
	21	Committee on Environmental Health

Report of the Board of Credentials: On recommendation of the Board of Credentials the following applicants for membership and changes in membership status were approved:

Active Members

Nereida L. Mujal, 4516 Western Avenue, N.W.
Artemis P. Simopoulos, 901 23rd Street, N.W.

Associate Members

Jerry S. Farber, 8812 Cameron Street, Silver Spring, Md.
Francisco Gnecco-Mozo, 2026 R Street, N.W.
Benjamin S. Turla, 19th and E Streets, S.E.
Otto E. Van Der Aue, 2025 E Street, N.W.

Resident-Intern Member

Elvin Gibson, 901 23rd Street, N.W.

Transfers

Active to Associate: Lois F. Lee and James W. Long
Resident-Intern to Associate: Juan Reynaldo Fraga

Resignations

Active: Thomas Sofianides
Associate: Harry C. Bates, Robert J. Brennan, Dan J. Feriozi, Andrew P. Ferry, Joseph N. Hamm, Frank Y. Jaggers, Hau Cheong Kwaan, Hei Kit Lee, Christopher J. Murphy, Jr., and Geneva D. Turner

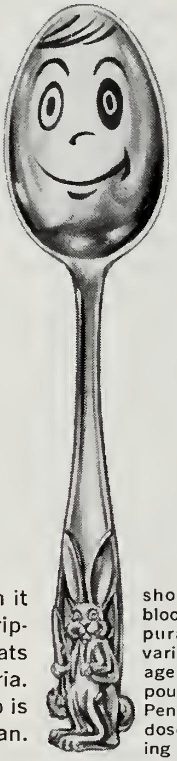
The Secretary was requested to check the resignation of Dr. John F. Preston to determine whether or not he had been an Active member a sufficient number of years to be placed in the "Life" category.

Dr. David G. Dixon was reinstated to Associate membership upon payment of his 1965 dues.

PENTID®-SULFAS FOR SYRUP

SQUIBB BUFFERED PENICILLIN POWDER WITH SULFADIAZINE, SULFAMETHAZINE, AND SULFAMERAZINE

the fruit punch that packs a wallop



Pentid-Sulfas for Syrup is a real knock-out when it comes to good taste. And, with a single prescription, you provide an anti-infective that combats both gram-positive and gram-negative bacteria. Notable for its economy, Pentid-Sulfas for Syrup is everybody's choice, patient, parent and physician.

Contraindications: Contraindicated in patients sensitive to sulfa or penicillin, pregnant females at term, premature infants, newborns during first week of life. **Precautions:** Watch for hypersensitivity reactions and overgrowth of nonsusceptible organisms. Observe usual precautions for sulfonamide therapy: adequate fluid intake; force fluids if urine volume is low; maintain urinary pH of 7 or higher; use only after critical appraisal in patients with liver or renal damage, urinary obstruction, blood dyscrasias. **Adverse Reactions:** Anaphylactoid shock (rare), G.I. disturbances, hepatitis, pancreatitis, blood dyscrasias, neuropathy, drug fever, urticaria, purpura, hematuria, crystalluria, conjunctival and scleral varicula, petechiae may occur. **Dosage:** Daily pediatric dosage should supply 65-100 mg. trisulfapyrimidines per pound body weight in divided doses q. 4 to 6 h. **Supply:** Pentid-Sulfas for Syrup when prepared, provides 80 cc. (16 doses) or 150 cc. (30 doses) of fruit-flavored syrup providing in each 5 cc. teaspoonful 125 mg. (200,000 u.) potassium penicillin G and 167 mg. each of sulfadiazine, sulfamethazine, and sulfamerazine.

Now . . . **NEW PENTID® '400'—SULFAS FOR SYRUP** (buffered penicillin powder with sulfadiazine, sulfamethazine, and sulfamerazine each 5 cc. providing 250 mg. [400,000 units] potassium penicillin G and 167 mg. each of sulfadiazine, sulfamethazine, and sulfamerazine). Available in 16-dose (80 cc.) and 30-dose (150 cc.) bottles.

For full information, see Product Brief.

SQUIBB Squibb Quality—the Priceless Ingredient

It was voted to notify Dr. Joseph N. Kennedy that he would be maintained as an Active member and his dues remitted during his period of service with the Armed Forces. It was also voted that the dues of all members who are drafted into military service or who are called up from the Reserves for active military duty be remitted during the period of that service.

Annual Audit: Copies of the annual audit as prepared by James T. Sanders, C.P.A. were provided Board members. The audit was accepted as presented.

Special Meeting on Relative Value Scale: Dr. Bacon was asked to present briefly the viewpoint of the members of the Relative Value Study Committee. This Committee and those in previous years had developed a revised scale and, with the approval of the Executive Board, had completed its printing for distribution to the membership. He pointed out that there was ample opportunity for individual revisions, since the Relative Value Study Committee had been assigned that task. Dr. Ecker, who had previously chaired this Committee, also commented on the work of the Committee. Since the Executive Board, at its previous meeting, had agreed to call a special meeting of the Society, further discussion was limited to the call for such a meeting. The proposed memorandum to all voting members suggested by the Secretary was discarded, and it was voted that the memorandum calling a special meeting should read as follows:

MEMORANDUM

To: All Voting Members
From: Robert J. Coffey
Subject: Special Meeting

The Executive Board of the Medical Society of the District of Columbia hereby calls a special meeting of all voting members of this Society for April 24 at 4:00 p.m. in the Society headquarters to consider only the following 2 questions:

1. Does the Society wish to change or reaffirm the policy adopted in 1959 authorizing a Relative Value Scale of the Medical Society of the District of Columbia?

2. If the Society wishes to reaffirm this policy, does it approve the Relative Value Scale as revised by the Relative Value Study Committee and approved by the Executive Board with the provisions made for revision consideration by that Committee?

Enclosed for your information is a copy of the Revised Relative Value Scale, as approved by the Relative Value Study Committee and the Executive Board.

Committee on Federal and District Health Programs: Dr. Crain was present and presented to the Executive Board a set of guidelines prepared by the Committee on Extended Care and Home Care in reference to Title XIX of P.L. 89-97. It was decided to reproduce these guidelines and distribute them to members of the Executive Board, requesting a response from each within 7 days.

Dr. Crain also referred to the hours of the day (10 a.m. and 11 a.m.) selected by Dr. Grant for meetings of the Health Department subcommittee to which he had been appointed and stated that he had been unable to attend because of these inconvenient hours.

Committee on Regional Medical Programs: The Secretary reported on the progress being made by this committee in accord with the action of the Executive Board "that it is the consensus of the Executive Board that the Medical Society of the District of Columbia take leadership in developing and establishing an Advisory Council as provided for in the law and to seek the coöperation of all other agencies concerned." He pointed out that a conference had been called by the Committee with representatives of the 5 surrounding medical societies and various local groups directly involved in this particular program. The meeting is scheduled for Wednesday, March 30, at 8:00 p.m.

Optometrist Bill: The Chairman reported on the preparation of testimony on H.R. 12937 having to do with the practice of optometry. Prior to the Board meeting the Chairman had sent copies of his and Mr. Magee's testimony as well as copies of the law and other material to the Board members. Mr. Magee added to the report given by the Chairman, listing the specific objections which had been made to H.R. 12937. He suggested that the material which had been sent to the Executive Board should also be sent to all members of the House District Committee. It was agreed that this should be done, together with a letter of transmittal over Dr. Coffey's signature.

The Chairman and Mr. Magee were commended for their activities in opposing H.R. 12937 and approval was given to those activities which have taken place to date. The Board also reiterated its support of the Society's policy on this subject adopted in 1946.

Committee on Sports and Physical Fitness: The Board members discussed in some detail the recommendations submitted by this Committee and approved the following resolution in regard to Physical Fitness Programs:

WHEREAS, This Committee of the Medical Society of the District of Columbia functions to serve the community as a whole; and

WHEREAS, This Committee recognizes that the plans for a physical fitness program in the public schools are proper and adequate but facilities and supervision are limited; *therefore be it*

Resolved, That the Medical Society recommends that consideration be given to the following:

1. The organization of a program providing adequate supervision by trained volunteer personnel
2. That facilities such as schools and public playgrounds be utilized in such a program
3. That effective use be made of talented teenagers who may be trained to supervise such programs
4. That the school day be extended in order to allow at least a 45-minute period for a physical development program
5. That the Parent-Teacher Associations in the District of Columbia be asked to coöperate in the implementation of such a program
6. That if any additional new school construction is forthcoming, facilities for physical education be included in the plans.

The Executive Board approved in principle a recommendation of the Committee for a Symposium on Sports and Physical Fitness.

AMA Dues: The Delegates to the AMA explained in some detail the reasons why they felt the request by the AMA for a dues increase was reasonable. There was considerable discussion in reference to this matter. The Society's Delegates were instructed to approve a raise in AMA dues, using their judgment in so doing.

Letter from Dr. Fulcher: A letter from Dr. O. Hugh Fulcher was read which suggested that the Society's representatives to Blue Cross confer with the Executive Board. It was voted that representatives of the Medical Society on the Boards of Group Hospitalization, Inc. and Medical Service of D. C. be asked to report at least once annually to the Executive Board.

Interagency Council on Smoking: A letter to Dr. Coffey from Mr. William Becque, Chairman of the Interagency Council on Smoking, requesting financial or other assistance for that Council, was referred to the Society's Committee on Smoking and Health, Dr. George W. Ware, Chairman.

There being no further business, the meeting was adjourned.

Bamadex® Sequels®

Contraindications: In hyperexcitability and in agitated prepsychotic states. Previous allergic or idiosyncratic reactions.

Precautions: Use with caution in patients hypersensitive to sympathomimetic compounds, who have coronary or cardiovascular disease, or are severely hypertensive.

Dextro-amphetamine sulfate: Use by unstable individuals may result in psychological dependence.

Meprobamate: Careful supervision of dose and amounts prescribed is advised; especially for patients with known propensity for taking excessive quantities of drugs. Excessive and prolonged use in susceptible persons, e.g. alcoholics, former addicts, and other severe psychoneurotics, has been reported to result in dependence. Where excessive dosage has continued for weeks or months, reduce dosage gradually. Sudden withdrawal may precipitate recurrence of pre-existing symptoms such as anxiety, anorexia, or insomnia; or withdrawal reactions such as vomiting, ataxia, tremors, muscle twitching and, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, reduce dose—operation of motor vehicles, machinery or other activity requiring alertness should be avoided. Effects of excessive alcohol consumption may be increased by meprobamate. Appropriate caution is recommended with patients prone to excessive drinking. In patients prone to both petit and grand mal epilepsy meprobamate may precipitate grand mal attacks. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side Effects: Overstimulation of the central nervous system, jitteriness and insomnia or drowsiness.

Dextro-amphetamine sulfate: Insomnia, excitability, and increased motor activity are common and ordinarily mild side effects. Confusion, anxiety, aggressiveness, increased libido, and hallucinations have also been observed, especially in mentally ill patients. Rebound fatigue and depression may follow central stimulation. Other effects may include dry mouth, anorexia, nausea, vomiting, diarrhea, and increased cardiovascular reactivity.

Meprobamate: Drowsiness may occur and can be associated with ataxia, the symptom can usually be controlled by decreasing the dose, or by concomitant administration of central stimulants. Allergic or idiosyncratic reactions: maculopapular rash, acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever, transient leukopenia. A case of fatal bullous dermatitis, following administration of meprobamate and prednisolone, has been reported. Hypersensitivity has produced fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, stomatitis, proctitis (1 case), anaphylaxis, agranulocytosis and thrombocytopenic purpura, and a fatal instance of aplastic anemia, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity, usually after excessive dosage. Impairment of visual accommodation. Massive overdosage may produce drowsiness, lethargy, stupor, ataxia, coma, shock, vasomotor, and respiratory collapse.

BAMADEX
SEQUELS
Sustained Release Capsules

First aid for a button popper

Second aid for a button popper

Bamadex® Sequels®

d-amphetamine sulfate (15 mg.) and meprobamate (300 mg.) Sustained Release Capsules

By providing combined anorexigenic-tranquilizing action, BAMADEX SEQUELS Capsules help your nonshrinking patients to establish new patterns of eating less. The amphetamine component suppresses the appetite, while the meprobamate helps allay nervousness and tension. And for most patients, the *sustained* release of the active ingredients makes possible convenient one-capsule-a-day dosage.

LEDERLE LABORATORIES • A Division of American Cyanamid Company, Pearl River, New York Lederle
6655

Meetings

The 115th Annual Convention of the American Medical Association will be held in Chicago, June 26–30. As in 1962, the Scientific Program will be at McCormick Place on the Lake Michigan shoreline, while the House of Delegates meets in the Palmer House. Dr. Raymond T. Holden, Dr. C. Willard Camalier, Jr., Delegates to the AMA, and Mr. George W. Cooley, Secretary, will represent the D. C. Medical Society at the meetings of the House of Delegates.

Six topics will be presented in the general scientific sessions on the subjects of population expansion, emphysema, burns, mysterious fevers, community hospital coronary care units, and headache. In addition to the general sessions, each of the 23 Scientific Sections will present scientific programs. Some of these will be joint meetings with specialty societies.

"The Responsibility of the Physician to the Registered Nurse" will be discussed, June 27, at an afternoon meeting, sponsored by the AMA Committee on Nursing, which will be held in Room 11 of McCormick Place. All nurses are invited to attend this program, but identification will be required.

The Woman's Auxiliary to the AMA will hold its 43rd Annual Convention, June 26–30. More than 2,000 physicians' wives are expected to attend the meeting at Chicago's Drake Hotel.

A special feature of the convention will be a guided tour of AMA headquarters and the new Institute for Biomedical Research. All physicians, their wives and other convention guests are invited to tour the building. Tours will be conducted every hour from 9:00 a.m. to 4:00 p.m., Monday, June 27 through Friday, July 1.

A panel discussion on Cardiopulmonary Aspects of Space Travel will highlight the **32nd Annual Meeting of the American College of Chest Physicians.** to be held in Chicago, June 23–27. Dr. Charles A. Berry, Chief of Center Medical Programs, NASA Manned Spacecraft Center, will moderate the panel which will feature astronauts Frank Borman, Colonel, USAF, MC, and James Lovell, Captain, MC, USN. The panel discussion will be presented on Saturday, June 25, 8:30 a.m., at the Sheraton-Chicago Hotel.

AMA's Section on Diseases of the Chest and the College will hold a combined meeting at McCormick Place on Monday, June 27. The popular "Fireside Conferences" will be held that evening at the Sheraton-Chicago Hotel as part of the combined meeting. The President of the College, Major General O. K. Niess, USAF, MC (Ret.), will preside over these sessions.

A Postgraduate Course on Pediatric Allergy will be presented at Children's Hospital, May 25, 26 and 27, in conjunction with the Departments of Pediatrics of George Washington University and Georgetown University Schools of Medicine. The Course will include practical immunology and allergy for the physician caring for children.

Dr. Saul Krugman, Professor and Chairman of the Department of Pediatrics at New York University, will deliver the Eleventh Annual Joseph Wall Memorial Lecture in the Wall Auditorium, May 27, at 2:00 p.m. His subject will be "Changing Patterns of Infectious Diseases."

Please address any communications to Dr. William A. Howard, Postgraduate Program, Children's Hospital of D. C., Washington, D. C. 20009.

Georgetown University School of Medicine will conduct a short-term training course for physicians on "The Management of the Chronic Disease Patient," which will consist of 2 all-day meetings, June 9 and 10. There will be a dinner and evening program on June 9. Registration is limited, but there is no fee. Application should be made to Dr. Margaret M. Kenrick, 3800 Reservoir Road, N.W., Washington, D. C. 20007.

General News

The Fourth Annual Benefit Baseball Game for Children's Hospital will be held at D. C. Stadium, Sunday, June 19, when the Washington Senators play the Cleveland Indians. The goal this year is $50,000. Last year Children's Hospital provided more than $800,000 of free medical care and treatment to the sick and injured children of the Washington Metropolitan Area.

George Washington University has received $300,000 from the Vocational Rehabilitation Administration, Department of Health, Education, and Welfare, for continued development of the **Rehabilitation Research and Training**

Center. The grant, which is the largest single Government grant yet awarded to George Washington University for research in the School of Medicine, will be used to further research and training in total comprehensive medical care while expanding to include emphasis on heart disease, cancer and stroke. The award covers the period from March 1, 1966 to February 28, 1967.

Dr. Thomas McPherson Brown, Professor of Medicine, and Dr. Charles S. Wise, Professor of Physical Medicine and Rehabilitation, are Codirectors of the Project, with Dr. Irene G. Tamagna, Clinical Professor of Medicine, as Program and Patient Care Director.

G.W.'s Rehabilitation Research and Training Center, established a year ago, is a coöperative University-wide project in which many schools and departments work together, including those of psychology, sociology, speech, engineering, education and law. Training programs, long- and short-term, will be conducted in the Center for all categories of students, undergraduate and graduate, in medical and medically-allied professions engaged in rehabilitation.

The James F. Mitchell Foundation for Medical Education and Research has received a new Public Health Service grant of $227,753 for heart research, to be used for investigations into the cause and development of hardening of the arteries. Administration of the grant will be under the National Heart Institute. The new studies, a 7-year project, will be carried out by a team headed by Dr. Tage Astrup, Director of the Foundation's Institute for Medical Research.

The Foundation has recently announced plans for a $2,750,000 hospital at Western and Wisconsin Avenues, N.W. for patients with heart and vascular diseases. Planned as an 82-bed hospital, it will adjoin the Foundation Building that houses the Washington Clinic. The hospital will be named for the late Dr. John Hugh Lyons, distinguished Washington surgeon who died in 1962.

Medical Economics, Inc., announces the **1966 Medical Economies Award** for "the best original article by a physician." The top award will be a 10-day expenses-paid luxury vacation for 2 at an exclusive resort in the Bahamas. Two runners-up will receive cash awards of $500 each.

All entries from doctors postmarked by August 31 will be considered. Manuscripts or requests for more information should be addressed to the Awards Editor, Medical Economics, Oradell, N. J. 07649.

Dr. Robert P. Grant has been named **Director of the National Heart Institute**, succeeding Dr. William H. Stewart, who is now Surgeon General of the Public Health Service.

Dr. Grant has been active in the cardiovascular research and training field for many years. He headed the Institute's laboratory section on cardiodynamics from 1950 to 1959. He then administered the Institute's program of research training grants and fellowship awards. In 1962 he joined the NIH Office of International Research, where he has served as Assistant Chief and later Chief of its European Office in Paris.

George Washington University Hospital is the **recipient of a recording ergograph** for use in its Myasthenia Gravis Clinic. The Potomac Valley Chapter of the Myasthenia Gravis Foundation made the presentation, April 17, at the Hospital to Dr. George D. Weickhardt, Assistant Clinical Professor of Neurology, who is Chief of the MG Clinic of the Hospital. The recorder is a gift of the Moses Family Circle, a charitable organization that has contributed donations and scholarships toward research and treatment of the disease. Dr. Weickhardt is also Chairman of the Medical Board of the Potomac Valley Chapter of the MG Foundation.

The Washington Psychiatric Society, at its meeting, March 25, elected the following officers:

Dr. Richard A. Steinbach, *President-elect*; Dr. Robert B. Neu, *Secretary*; and Dr. Milton Meltzer, *Treasurer*.

Dr. Paul Chodoff will serve as President during 1966–67. New Council members elected were Dr. Edward I. Kushner and Dr. Paul D. Sullivan, Jr.

The Public Health Service has published 2 new booklets for public information. "The Cancer Story," a 52-page publication from the National Cancer Institute, is expected to receive wide use in junior and senior high schools as one of several teaching aids produced as collaborative projects by the National Cancer Institute and the National Science Teachers Association.

A 13-page illustrated pamphlet entitled "Peptic Ulcer" has been prepared by the National Institute of Arthritis and Metabolic Diseases. It notes that each day an estimated 4,000 more persons develop an ulcer and that each year about 10,000 individuals in the United States die of complications of peptic ulcer. Single copies of both of these pamphlets are available from the Public

Health Service, Washington, D. C. 20201, or may be purchased from the Government Printing Office, Washington D. C. 20402. "The Cancer Story" sells for 25 cents each and "Peptic Ulcer" for 15 cents per copy.

Personals

Dr. Frank N. Miller, Jr., Professor of Pathology at George Washington University School of Medicine, was presented the first annual Golden Apple Award on Student Research Day, March 26. This event was sponsored by the William Beaumont Medical Society, an honor society founded at George Washington in 1935. Dr. Miller was cited as "the instructor who has contributed the most to students in the first and second years of medical school."

Dr. Miller, who received both his undergraduate and medical degrees from George Washington, also received a plaque from the Student Medical Association and the Class of 1967 for "excellence in teaching the basic medical sciences."

Dr. Roland B. Scott, Head of the Department of Pediatrics at Howard University College of Medicine, has been elected Vice President of the American Academy of Allergy.

Dr. William D. Oldham was one of 7 physicians who left the United States on April 5, 1966 for a 60-day period of service with Project Vietnam.

Dr. Oldham, engaged in the private practice of urology, has served as Clinical Instructor in Urology at George Washington University School of Medicine since 1958. He is a graduate of the University of Louisville School of Medicine, Class of 1951.

Dr. Percy E. Hopkins, Chairman of the Board of Trustees of the American Medical Association, has announced the reappointment of 3 members of the D. C. Medical Society to committee assignments. **Dr. Dale C. Cameron** will serve again as Chairman of the Committee on Alcoholism and Addiction of the Council on Mental Health; **Dr. James E. Fitzgerald** is reappointed a member of the Council on National Security; **and Dr. Donald D. Flickinger** is reappointed a member of the Committee on Aerospace Medicine of the Council on Occupational Health.

Dr. Wallace M. Yater, Editor of the MEDICAL ANNALS, was featured in February in the series, Medical Men of Georgetown, which appears each month in the *Georgetown Medical Bulletin.*

Dr. Stephen W. Nealon, Jr., Editor of the *Bulletin*, described Dr. Yater as a "physician, teacher, scholar, author and clinical investigator."

"In the long history of Georgetown University School of Medicine," he wrote, "Dr. Yater has been a most distinguished teacher. His teaching combined an inimitable balance of classroom, library and laboratory as a prime adjunct to all important bedside teaching. His logical informed mind was always at its best in discussion of cases in Clinical Conferences and his knowledge amazed and inspired his students. He instilled in them a desire to learn, personal and intellectual integrity, and dedication to duty which stressed responsibility toward the patient."

Dr. Yater became Associate Professor of Medicine at Georgetown University in 1929 and served as Professor and Director of the Department of Medicine from 1930 to 1945. He was named Emeritus Professor of Medicine on November 22, 1965 at the Georgetown Luncheon held during the ANNUAL SCIENTIFIC ASSEMBLY of the D. C. Medical Society.

Dr. Joseph F. Sadusk, Jr., Medical Director of the Food and Drug Administration, resigned his position from the Agency, effective April 15. Dr. Sadusk is on leave from George Washington University School of Medicine, where he is Professor of Preventive Medicine and Community Health. He joined the FDA 2 years ago.

Obituaries

Agnes Conrad, B.S., M.S., M.D.

(1891–1966)

DR. AGNES CONRAD, who was engaged in the practice of psychiatry in Washington for many years, died, February 17, 1966 at Doctors Hospital.

Dr. Conrad was born in Clinton, Missouri, January 31, 1891 to Cuthbert P. and Sarah Harris Conrad. She attended elementary schools in Geneva, Switzerland. She graduated in biology from the University of Arizona in 1915, received her Master's degree in psychology from the University of Wisconsin in 1919, and her medical degree from Johns Hopkins University School of Medicine in 1925. She served her internship at St. Elizabeths Hospital in Washington, D. C. and continued as resident physician at the same hospital. She was later with the Vanderbilt Clinic and Presbyterian Hospital in New York City as attending psychiatrist and was an associate in psychiatry at the College of Physicians and Surgeons, Columbia University from 1930 to 1947.

During World War II she served from 1944 to 1946 in the Medical Corps of the U. S. Naval Reserve, with the rank of Lt. Commander.

She practiced in the District for the last 20 years with offices in her home at 2844 Wisconsin Avenue, N.W.

She was a diplomate in psychiatry of the American Board of Psychiatry and Neurology, a Fellow of the American Psychiatric Association, a Life member of the Medical Society of the District of Columbia and the New York Academy of Medicine, a member of the American Medical Association, the Association of Military Surgeons of the United States, St. Elizabeths Hospital Medical Society, the Washington Psychiatric Society, and the Johns Hopkins Medical-Surgical Association.

There are no immediate survivors. She left several cousins, among them Miss Augusta Conrad of 2126 Connecticut Avenue, N.W., Washington, D. C.

Edward Alexander Cafritz, M.D.

(1894–1966)

Dr. Edward A. Cafritz, Washington surgeon and philanthropist, died, February 25, 1966 in Hollywood, Florida, where he was vacationing. He lived at the Westchester Apartments, 4000 Cathedral Avenue, N.W., and maintained offices at 1835 Eye Street, N.W.

Dr. Cafritz was born in New York City in 1894 to Nathan and Anna Cafritz. He was a brother of the late Morris Cafritz, well-known Washington builder and philanthropist. Dr. Cafritz attended public schools in Washington and graduated in medicine from the University of Maryland in 1918. He interned at the University Hospital for a year, served as resident surgeon another year, and served a residency in surgery at Providence Hospital, Washington, from 1920 to 1921.

Dr. Cafritz maintained a general surgical practice in Washington until 1926, when he went abroad for further training in surgery at the University of Vienna and at the University of Budapest. He returned to Washington and served for 28 years as Instructor and Associate in Surgery at George Washington University School of Medicine.

Dr. Cafritz was senior attending surgeon at Emergency Hospital and later at the Washington Hospital Center until 1959, and continued as an associate on the staff. In 1964 he donated funds for an intensive care unit at the Center.

Dr. Cafritz was one of the founders, in 1912, of the Young Men's Hebrew Association, now the Jewish Community Center, of which he later served as Board member and Vice President. At the time of his death he was a member of the Executive Committee of the Morris Cafritz Memorial Hospital.

Dr. Cafritz was a Fellow of the American College of Surgeons, a member of the American Medical Association, a Life member of the Medical Society of the District of Columbia, and a member and Past President of the Jacobi Medical Society and the Washington Academy of Surgery.

He belonged to the Washington Hebrew Congregation, where he was a former Board member; he was attending physician at the Hebrew Home for the Aged, and a former Board member. A Mason, he was a member of Almas Temple and the Argo Lodge of B'nai B'rith. He served on the Welfare Committee of the Variety Club and was a member of the Woodmont Country Club. He was a charter member of Phi Alpha fraternity at the University of Maryland.

Surviving him are his wife, Mrs. Mildred Cafritz, of the home address; 2 sons, William N. Cafritz and James E. Cafritz, of Bethesda, Md.; and a sister, Mrs. Carrie Carroll, of Washington.

Luther Henry Snyder, A.B., M.D.

(1910–1966)

Dr. Luther H. Snyder, Washington internist and educator, died at his home at 3640 Everett Street, N.W., March 6, 1966. His offices were at 915 19th Street, N.W.

Dr. Snyder was born in St. Thomas, Pennsylvania, October 31, 1910 to Henry W. Snyder, Sr., D.D., and Mrs. Dorothea H. Snyder. He attended public schools in Johnstown, Pa., and received his undergraduate degree from Gettysburg College in 1931. He graduated in medicine from George Washington University in 1935, and interned the following year at Garfield Memorial Hospital.

Dr. Snyder was on the faculty of George Washington University during his entire medical career. Beginning as Instructor in Physiology in 1936, he became, successively, Instructor in Pathology, Clinical Instructor in Medicine (1939–1954), Associate in Medicine, and Assistant Clinical Professor of Medicine. He was on the attending staffs of Doctors and George Washington University Hospitals, having served as Chief of Staff at Doctors from 1962 to 1963 and as associate head of the Department of Medicine since 1963.

Dr. Snyder interrupted his private practice to serve in the Medical Corps of the U. S. Army during World War II. He was on active duty from 1941 to 1946, and was separated as Colonel. During the last 2 years of service he was medical inspector in the Panama Canal Department.

He had been an Active member of the Medical Society of the District of Columbia since 1937, a Fellow of the American College of Cardiology, a member of the American Medical Association, the George M. Kober Medical Society, and the George Washington University Medical Alumni Association. He was President of the latter in 1953–54 and was given its Annual Award of Merit in 1959. He was also a member of the Kiwanis Club of Washington and a member of the Potomac River Power Squadron.

Always interested in his church, St. Paul's Lutheran Church, he was a member of its Council from 1940 and formerly President of the Council. He was a member of the Board of Gettysburg College and was active in Boy Scout work.

Surviving him are his wife, Mrs. Gladys Gustafson Snyder, and 2 daughters, Gail and Lynn, of the home address, and a son, Don H. Snyder, of 3721 39th Street, N.W. His father, the Reverend Snyder, survives him as well as 2 brothers, Dr. William U. Snyder, of Athens, Ohio, and the Rev. Henry W. Snyder, Jr., of Van Wert, Ohio.

DDT-Induced Myasthenia—Kailin and Hastings

(Continued from page 244)

References

1. Kailin, E. W., and Brooks, C. R.: Med. Ann. D. C., 1963, **32**, 1.
2. Serra, C., and Covello, L.: Int. J. Neurol., 1960, **1**, 358.
3. Rao, U. R.: J. Postgrad. Med., 1963, **9**, 138.
4. Adams, R. D., Denny-Brown, D., and Pearson, C. M.: Diseases of Muscle, 2nd ed. New York: Harper, 1962, pp. 220–232.
5. Norris, F. H.: The EMG. A Guide and Atlas for Practical Electromyography. New York: Grune & Stratton, 1963, pp. 10–12.
6. Johns, R. H., Grob, D., and Harvey, A. M.: Bull. Hopkins Hosp., 1956, **99**, 125.
7. Wing, L.: J. Psychosom. Res., 1964, **7**, 283.
8. Greenfield, N. S., Alexander, A. A., and Roessler, R.: Arch. Gen. Psychiat. (Chicago), 1963, **9**, 129.
9. Whatmore, G. B., and Ellis, R. M.: Amer. J. Psychiat., 1964, **120**, 1166.
10. Eyzaguirre, C., and Lilienthal, J. L., Jr.: Proc. Soc. Exp. Biol. Med., 1949, **70**, 272.
11. Philips, F. S., and Gilman, A. Z.: Med. Div. Report Public Control No. 5030-50. Washington, D. C.: Armed Service Forces, Office of the Chief, Chemical Warfare Service, 1945 (August 17).
12. James, D., and Davis, K. B., Jr.: Amer. Zool., 1965, **5**, 229, and personal communication.
13. Allison, A. C., and Mallucci, L.: Nature (London), 1964, **203**, 1024.
14. Allison, A. C., and Mallucci, L.: Lancet, 1964, **2**, 1371.

Hypothermia in Experimental Renal Failure —Hirsch et al

(Continued from page 260)

Acknowledgment is made to the George Hyman Memorial Research Foundation for the use of the laboratory, to the National Library of Medicine for assistance with references through Medlars Search, and to Mr. Ralph M. Tillby, Jr., for technical assistance.

References

1. Morse, W. I., and Coupe, R. L.: Acute renal tubular necrosis: report of case with hyperpyrexia, treated by reduction of body temperature. Canad. Med. Ass. J., 1960, **82**, 830.
2. Schreiner, G. E.: Role of hemodialysis (artificial kidney) in acute poisoning. Arch. Intern. Med. (Chicago), 1958, **102**, 896.
3. Matloff, D. B., and Gowen, G. F.: Hypothermic perfusion—protection for the ischemic kidney. Arch. Surg. (Chicago), 1962, **85**, 999.
4. Cerilli, G. J.: Hypothermia in management of acute renal failure. Surgery, 1963, **54**, 309.
5. Krebs, H. A., and Henseleit, K.: Untersuchungen über die Harnstoffbildung im Tierkörper. Z. physiol. Chem., 1932, **210**, 33.
6. Harvey, S. C.: Radiophosphorus metabolism of guinea pig heart and actions of digitoxin and pentobarbital. Amer. J. Physiol., 1955, **183**, 559.

brings peace to the hyperactive colon

CANTIL®
(mepenzolate bromide)

helps restore normal motility and tone

"In 40 of 44 cases of irritable or spastic colon, Cantil [mepenzolate bromide] or Cantil with Phenobarbital reduced or abolished abdominal pain, diarrhea and distention and promoted restoration of normal bowel function . . . Cantil [mepenzolate bromide] proved to be singularly free of anticholinergic side-effects . . . Urinary retention, noted in two cases was eliminated in one by reducing dosage."[1]

IN BRIEF: One or two tablets three times a day and one or two at bedtime usually provide prompt relief. Cantil with Phenobarbital may be prescribed if sedation is required.

Dryness of the mouth or blurring of vision may occur but it is usually mild and transitory. Urinary retention is rare. Caution should be observed in prostatic hypertrophy—withhold in glaucoma. Cantil with Phenobarbital is contraindicated in patients sensitive to phenobarbital.

Supplied: CANTIL (mepenzolate bromide)—25 mg. per scored tablet. Bottles of 100 and 250. CANTIL with PHENOBARBITAL—containing in each scored tablet 16 mg. phenobarbital (warning: may be habit forming) and 25 mg. mepenzolate bromide. Bottles of 100 and 250.

1. Riese, J. A.: Amer. J. Gastroent. 28:541 (Nov.) 1957

LAKESIDE LABORATORIES, INC. Milwaukee, Wisconsin 53201

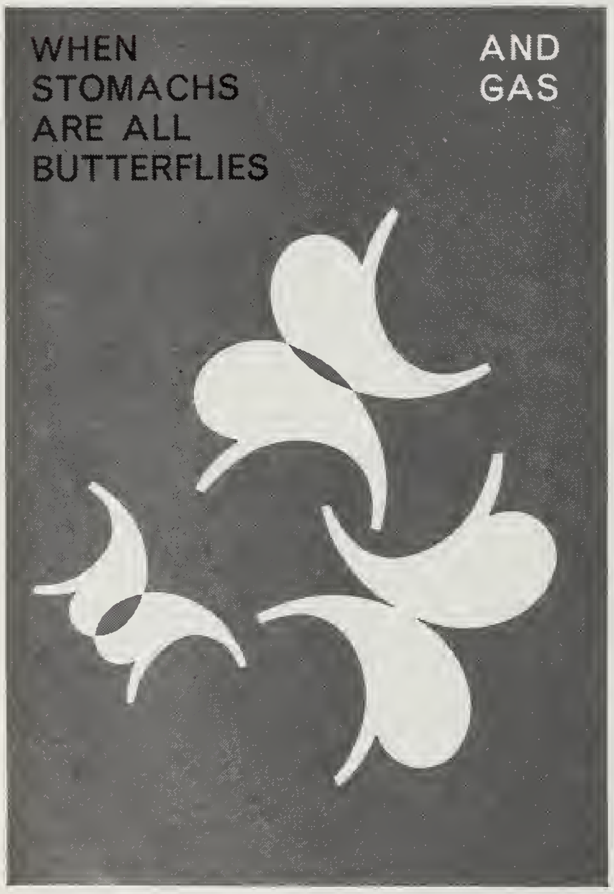
LAKESIDE

PRODUCTS
FOR PATIENTS
YOU SEE
EVERY DAY

DACTILASE®

Each tablet contains:
Dactil® (piperidolate hydrochloride), 50 mg.; Standardized cellulolytic* enzyme, 2 mg.; Standardized amylolytic enzyme, 15 mg.; Standardized proteolytic enzyme, 10 mg.; Pancreatin 3X** (source of lipolytic activity), 100 mg.; Taurocholic acid, 15 mg.

*Need in human nutrition not established.
**As acid resistant granules equivalent in activity to 300 mg. Pancreatin N.F.



WHEN STOMACHS ARE ALL BUTTERFLIES
AND GAS

In chronic or acute indigestion, fluttery, gassy stomachs obtain prompt, gratifying relief through the antispasmodic, surface anesthetic and enzymatic activity of Dactilase. Dactilase decreases hypermotility and pain and reduces the production of gas. Dactilase does not induce stasis, but helps restore normal tone. It has little or no effect on enzyme secretions, but *adds* enzymes, thus contributing to the digestive efficiency of the patient.

Side Effects and Contraindications: Dactilase is almost entirely free of side effects. However, it should be withheld in glaucoma and in jaundice due to complete biliary obstruction.

Administration and Dosage: One tablet with, or immediately following, each meal. Tablets should be swallowed whole.

Supplied: Bottles of 60 and 250.

LAKESIDE LABORATORIES, INC., Milwaukee, Wisconsin 53201

LAKESIDE

PRODUCTS
FOR PATIENTS
YOU SEE
EVERY DAY

For cold hands and feet, nothing beats hot stoves—but they *are* awkward to carry around. Now Gerilid, in good-tasting take-along chewable tablets can provide rapid vasodilation of peripheral circulation, bringing real warmth to the extremities and decreasing sensitivity to sudden temperature change. Patients *like* Gerilid and *know* they are getting relief.

WARMTH
FOR COLD
HANDS AND FEET

GERILID™

Each chewable tablet contains:
nicotinic acid (niacin) 75 mg. and
aminoacetic acid (glycine) 750 mg.

Administration and Dosage: One or two chewable tablets 3 times a day before meals. If flushing is objectionable, dosage may be lowered. However, tolerance to flushing usually develops without loss of efficacy in regard to vasodilation. The recommended dosage should not be exceeded.

Side effects: Occasional lightheadedness or transient itching which may disappear with continued use. There are no known contraindications; however, caution is advised when there is a concomitant administration of a coronary vasodilator.

Supplied: Packages of 50 chewable tablets.

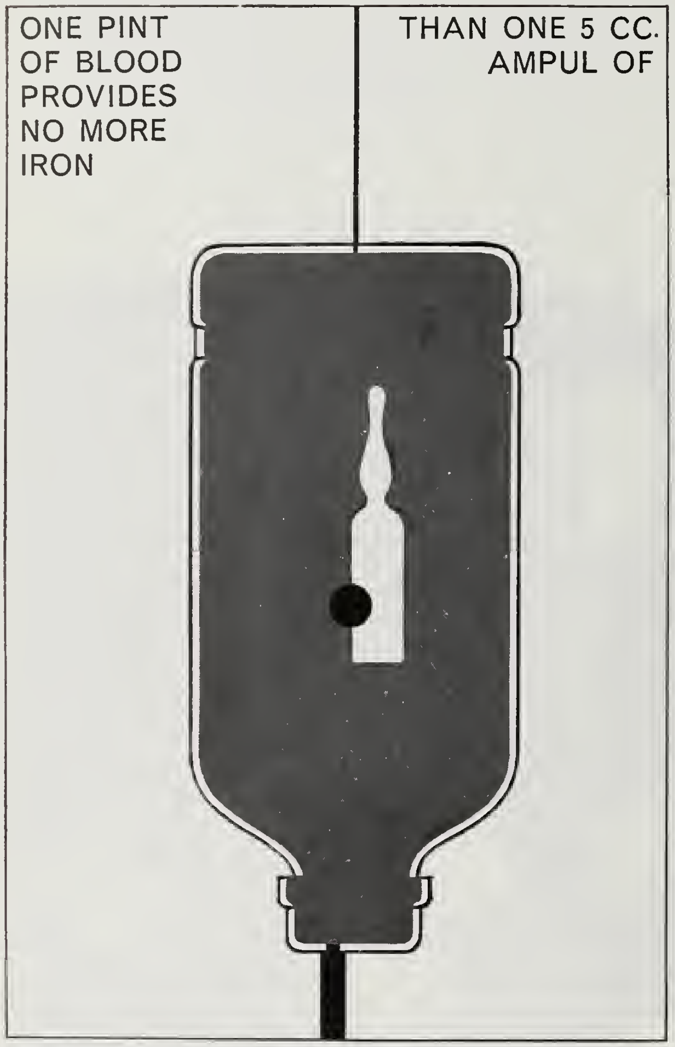
Also available in liquid form as Geriliquid®, in bottles of 8 and 16 ounces.

LAKESIDE LABORATORIES, INC., Milwaukee, Wisconsin 53201

LAKESIDE

PRODUCTS
FOR PATIENTS
YOU SEE
EVERY DAY

Obstetrical or post—surgical patients requiring a dependable increase in hemoglobin will receive as much iron (250 mg. in a 5 cc. ampul) as in one pint of blood. Imferon (iron dextran injection) is less expensive and it avoids the well-recognized hazards of whole blood transfusion. When patients cannot—or cannot be relied upon to—take oral iron, Imferon (iron dextran injection) will rapidly supply needed iron for reserve stores.


ONE PINT OF BLOOD PROVIDES NO MORE IRON
THAN ONE 5 CC. AMPUL OF

IMFERON®
(iron dextran injection)

IN BRIEF: ACTION AND USES: A single dose of Imferon (iron dextran injection) will measurably begin to raise hemoglobin and a complete course of therapy will effectively rebuild iron reserves. The drug is indicated only for specifically-diagnosed cases of iron deficiency anemia and then only when oral administration of iron is ineffective or impractical. Such iron deficiency may include: patients in the last trimester of pregnancy; patients with gastrointestinal disease or those recovering from gastrointestinal surgery; patients with chronic bleeding with continual and extensive iron losses not rapidly replenishable with oral iron; patients intolerant of blood transfusion as a *source of iron;* infants with hypochromic anemia; patients who cannot be relied upon to take oral iron.
COMPOSITION: Imferon (iron dextran injection) is a well-tolerated solution of iron dextran complex providing an equivalent of 50 mg. in each cc. The solution contains 0.9% sodium chloride and has a pH of 5.2-6.0. The 10 cc. vial contains 0.5% phenol as a preservative.
ADMINISTRATION AND DOSAGE: Dosage, based upon body weight and Gm. Hb./100 cc. of blood, ranges from 0.5 cc. in infants to 5.0 cc. in adults, daily, every other day, or weekly. The total iron requirement for the individual patient is readily obtainable from the dosage chart in the package insert. Deep intramuscular injection in the upper outer quadrant of the buttock, using a Z-track technique, (with displacement of the skin laterally prior to injection), insures absorption and will help avoid staining of the skin. A 2-inch needle is recommended for the adult of average size.
SIDE EFFECTS: Local and systemic side effects are few. Staining of the skin may occur. Excessive dosage, beyond the calculated need, may cause hemosiderosis. Although allergic or anaphylactoid reactions are not common, occasional severe reactions have been observed, including three fatal reactions which may have been due to Imferon (iron dextran injection). Urticaria, arthralgia, lymphadenopathy, nausea, headache and fever have occasionally been reported. Initial test doses of 0.5 cc. are advisable.
PRECAUTIONS: If sensitivity to test doses is manifested, the drug should not be given. Imferon (iron dextran injection) must be administered by deep intramuscular injection only. Inject only in the upper outer quadrant of the buttock, not in the arm or other exposed area.
CONTRAINDICATIONS: Imferon (iron dextran injection) is contraindicated in patients sensitive to iron dextran complex. Since its use is intended for the treatment of iron deficiency anemia only it is contraindicated in other anemias.
CARCINOGENICITY POTENTIAL: Using relatively massive doses, Imferon (iron dextran injection) has been shown to produce sarcoma in rats, mice and rabbits and possibly in hamsters, but not in guinea pigs. The risk of carcinogenesis, if any in man, following recommended therapy with Imferon (iron dextran injection) appears to be extremely small.
SUPPLIED: 2 cc. ampuls, boxes of 10; 5 cc. ampuls, boxes of 4; 10 cc. multiple dose vials.

LAKESIDE LABORATORIES, INC., Milwaukee, Wisconsin 53201

LAKESIDE

PRODUCTS
FOR PATIENTS
YOU SEE
EVERY DAY

SAVES
LIVES
SAVES
MONEY
WASTES
WATER

METAHYDRIN (trichlormethiazide) is prescribed by physicians because it not only approximates the diuretic efficacy of parenteral meralluride injection . . . but, *it is the least expensive of all "brand-name" thiazides.* Therefore, when you prescribe METAHYDRIN (trichlormethiazide) your patients receive the thiazide diuretic that removes a little more salt and water than earlier thiazides, with relatively less loss of potassium . . . and, it's therapy they can more easily afford . . . *only pennies a day.*

METAHYDRIN®
(trichlormethiazide)
oral diuretic

Dosage: One 2 or 4 mg. tablet once or twice daily.

Precautions: As with all effective diuretics, vigorous therapy may produce electrolyte depletion. Patients with severely reduced renal function should be observed carefully since thiazides may be contraindicated. Care should be taken with patients predisposed to diabetes or gout. Patients with a tendency to potassium deficiency, as in hepatic cirrhosis or diarrheal syndromes, or those under therapy with digitalis, ACTH, or certain adrenal steroids, also should be watched carefully.

Side Effects: Nausea, flushing, constipation, skin rash, muscle cramps and gastric discomfort have occasionally been noted; rarely thrombocytopenia and bone marrow depression, photosensitivity, cholestatic jaundice, pancreatitis, perimacular edema, gout and diabetes have been caused by the administration of thiazides.

Contraindications: Complete renal shutdown; rising azotemia or development of hyperkalemia or acidosis in severe renal disease; demonstrated hypersensitivity.

How Supplied: Bottles of 100 and 1000 tablets.

LAKESIDE LABORATORIES, INC., Milwaukee, Wisconsin 53201

LAKESIDE

PRODUCTS
FOR PATIENTS
YOU SEE
EVERY DAY

Metatensin lowers blood pressure and keeps it low—effectively and economically. It combines reserpine with trichlormethiazide which affords more potent saluresis with less loss of potassium than from earlier thiazides. Reserpine contributes antihypertensive effect by relieving anxiety and tension. Metatensin is well-tolerated over long periods; with its effectiveness and economy it assures antihypertensive therapy you and your patients can stay with.

**BRING IT DOWN
AND
KEEP IT DOWN**

190
102

METATENSIN®

Each scored tablet contains:
METAHYDRIN® (trichlormethiazide)
2 mg. or 4 mg. and
Reserpine 0.1 mg.

Usual adult dose: One tablet twice daily. **Precautions and side effects:** Patients with hepatic cirrhosis or diarrheal syndromes, or under therapy with digitalis, ACTH, or potassium-losing steroids, should be observed for signs of hypokalemia. With thiazides, electrolyte depletion, diabetes, gout, granulopenia, nausea, pancreatitis, cholestatic jaundice, flushing, mild muscle cramps, constipation, photosensitivity, acute myopia, perimacular edema, paresthesias, neonatal bone marrow depression in infants of mothers who received thiazides during pregnancy, skin rash or purpura with or without thrombocytopenia, may occur. With reserpine, untoward effects may include depression, peptic ulcer and bronchial asthma. Withdraw medication at least 7 days prior to electroshock therapy, 2 weeks prior to elective surgery.

Contraindications: Complete renal shutdown, rising azotemia or development of hyperkalemia or acidosis in severe renal disease.

Supplied: Metatensin tablets, 2 mg., 4 mg.—bottles of 100 and 1000.

LAKESIDE LABORATORIES, INC., Milwaukee, Wisconsin 53201

LAKESIDE

PRODUCTS
FOR PATIENTS
YOU SEE
EVERY DAY

when the feeling of guilt overwhelms

NORPRAMIN®
(desipramine hydrochloride)
non-sedating · rapid-acting
ANTIDEPRESSANT

overcomes guilt, lifts depression, restores confidence

Feelings of guilt, worthlessness, emptiness and loss frequently characterize depression. Such feelings, along with insomnia, physical complaints, sadness, apprehension, and other symptoms of depression rapidly respond to Norpramin (desipramine hydrochloride). Improvement often begins in 2-5 days, sometimes in less. A few patients, sensitive to central nervous system stimulants may become restless as depression is lifted—in such cases dosage may be reduced or a tranquilizer added.

Indications: In depression of any kind—neurotic and psychotic depressive reactions; manic-depressive or involutional psychotic reactions. **Dosage:** Optimal results are obtained at a dosage of two 25 mg. tablets t.i.d. (150 mg./day). **Contraindications and Precautions:** Glaucoma, urethral or ureteral spasm, recent myocardial infarction, severe coronary heart disease and epilepsy. Should not be given within two weeks of treatment with a monoamine oxidase inhibitor. Safety in human pregnancy has not been established. **Adverse Effects:** Side effects, usually mild may include: dry mouth, constipation, dizziness, palpitation, delayed urination, "bad taste," sensory illusion, tinnitus, agitation and stimulation, sweating, drowsiness, headache, orthostatic hypotension, flushing, nausea, cramps, weakness, blurred vision and mydriasis, rash, allergy, transient eosinophilia, granulopenia, altered liver function, ataxia and extrapyramidal signs. **Supplied:** Norpramin (desipramine hydrochloride) tablets of 25 mg., in bottles of 50, 500 and 1000.

LAKESIDE LABORATORIES, INC., Milwaukee, Wisconsin 53201

LAKESIDE
PRODUCTS
FOR PATIENTS
YOU SEE
EVERY DAY

BOOK REVIEWS

Vitreoretinal Pathology and Surgery in Retinal Detachment. PAUL A. CIBIS, M.D. Price, $20.00. Pp. 293, with 227 figures. St. Louis: Mosby, 1965.

It is seldom that a new book with original concepts is given to the medical profession. Such is this monograph, which offers an entirely new approach in a highly specialized facet of ocular surgery. The progress of the surgical treatment of retinal detachment has been great over the past 10 years, and yet many severe or repeated detachments are considered hopeless. Dr. Cibis has opened the field to new approaches by bold techniques of intravitreal surgery designed to restore vision in eyes usually destined for the pathology laboratory or phthisis bulbi.

The book adequately covers vitreoretinal pathology in retinal detachment, including experimental observations. Logically following are certain surgical techniques based upon the theoretical knowledge developed.

The author's innovation is an "internal" approach to complicated retinal detachment with vitreoretinal fibroplasia rather than an "external" one. He emphasizes the complications he encountered in this type of surgery in order to give others the advantage of his work.

Surgical approaches include vitreous supplementation, transfer, replacement with separation of vitreoretinal fibrous tissue, intravitreal cryotherapy, and intravitreal biopsies. These techniques are designed as auxiliary procedures to the usual methods in order to cope with complicated detachments generally considered inoperable.

This book is highly recommended for the ophthalmic surgeon dealing with retinal detachments and for students in this field. These challenging concepts are stimulating to any ophthalmologist desirous of being aware of "new frontiers in the fight against blindness."

It has been with pleasure and with sadness that I have reviewed this excellent treatise. I have had the pleasure of knowing Paul Cibis and discussing these exciting procedures with him personally; I had the sadness of being with his chief, Professor Bernard Becker, in Spain when he was informed of Dr. Cibis' untimely death upon the completion of this work. The book will be a collector's item.

JOHN HARRY KING, JR., M.D.

Surgery of the Foot, 2nd ed. HENRI L. DUVRIES, B.S., D.S.C., M.D. Price, $17.50. Pp. 586, with 448 figures. St. Louis: Mosby, 1965.

Dr. DuVries is a recognized authority on surgery of the foot, and his devotion to this aspect of orthopedic surgery covers a span of over 30 years. The first edition of his book was published in 1959. This, the second edition, is much improved with major revisions being introduced in most chapters, including new material and illustrations.

The printing, texture of the paper, roentgenograms and illustrations are of excellent quality, lending, therefore, to easy reading. The numerous and various operative procedures are outlined clearly and thoroughly throughout the text.

The initial chapters deal with the basic structures and function of the foot, together with a method of adequate examination and diagnosis. Such conditions as infections, burns and freezing, ulcerations and disorders, diseases of the skin, toenails, fascia and synovium are well presented. The resident in orthopedic surgery will find the section dealing with the basic principles of tendon surgery and also of fractures and dislocations most enlightening.

The highlight of this book is Dr. DuVries' philosophy on static deformity of the forefoot, dealing primarily with the 5 types of hallux valgus. Here is presented his approach to this major problem with detailed discussion on the many other varied procedures. The widely accepted Keller technique is shown to be a disabling procedure. The major deformities and anomalies of the foot and congenital defects, including club foot and its variations, are discussed at length. Both conservative and surgical approaches are entertained.

There is failure to mention the excellent results obtained following the injection of a mixture of 1 per cent Xylocaine® and hydrocortisone into the apophysis of the calcaneus bone in Sever's disease. It should be pointed out that migration of Kirschner wires can occur in fixation of fractures of the foot, which may result in a hopeless situation. This can be avoided by utilizing threaded wires which are easily placed and removed.

The pathology of a disruption of the deltoid ligament of the ankle joint is inadequately discussed. Unfortunately, the contributing author makes no mention of the fact that the lateral malleolus or distal fibula bone is most commonly fractured with this injury. The proper surgical approaches to this problem are not completely presented. One utilizing this book as a reference should have available to him the varied methods of therapy such as the Bosworth procedure or the screw fixation of the fibula and tibia bones. In addition, the variation of measurements of the tilt of the talus bone and the normal ankle and its pathologic disorders should be more fully entertained. The arthritides are superficially discussed, and very little information is given on such entities as gout and psoriasis.

I think, however, that this book is a welcome addition to the problem of foot surgery. Between 50 and 70 per cent of civilized society has, or will have, some foot disorder. It behooves the practicing orthopedic surgeon to adopt a rational approach to foot surgery. We have all seen disastrous results due to inadequate or improper surgical endeavors.

I would highly recommend this book to the resident in orthopedic surgery, primarily to serve as a stable and reasonable foundation on which to develop a sensible approach to surgery of the foot.

FRANCIS P. MILONE, M.D.

(Continued on page 48)

In colicky infants Pediatric Piptal with Phenobarbital slows down spasm, diminishes pain and crying and improves feeding patterns. It permits sleep and rest for patient and family. The less than hypnotic amount of phenobarbital in the recommended dose affords a mild, calming action and enhances the antispasmodic action of Piptal (pipenzolate bromide). The latter drug, as reported in the medical literature, has a favorable ratio of effectiveness to side-effects which is unusual in anticholinergics and thus is particularly appropriate to pediatric use.

QUIETS PHONES
QUIETS PARENTS
QUIETS **COLIC**

PEDIATRIC PIPTAL® WITH PHENOBARBITAL

each cc. contains 6 mg. phenobarbital (warning: may be habit forming); 4 mg. Piptal® (pipenzolate bromide), and 20% alcohol.

Pleasant-tasting Pediatric Piptal with Phenobarbital is miscible in milk, formulas and fruit juices, and may also be given by dropper directly on the infant's tongue. Dosage is 0.5 cc. 15 minutes before feeding; in severe cases, 1.0 cc. four times daily. High doses may occasionally cause constipation with tenesmus and, rarely, flushing without fever. It is contraindicated in bowel obstruction or sensitivity to phenobarbital or anticholinergics. Available in 30 cc. dropper bottles, droppers calibrated to deliver 0.5 cc.

LAKESIDE LABORATORIES, INC., Milwaukee, Wisconsin 53201

LAKESIDE

PRODUCTS
FOR PATIENTS
YOU SEE
EVERY DAY

Book Reviews

(*Continued from page 46*)

Symposium on the Lens. Sponsored by Visual Sciences Study Section and University of Minnesota. Supported by National Institute of Neurological Diseases and Blindness, National Institutes of Health, Conference Grant No. NB-05145-01. Organizing Committee: JOHN E. HARRIS, Chairman; MARGUERITE CONSTANT, CALVIN HANNA, SEYMOUR HALBERT, V. EVERETT KINSEY and ALBERT POTTS. Price, $18.50. Pp. 381, illustrated. St. Louis: Mosby, 1965.

The title of this book could be modified to more specifically describe its contents. "Symposium on the Lens" would be more descriptive if entitled the "Symposium on Lens Biochemistry." This work consists of a group of papers delivered at the University of Minnesota under the auspices of the Association for Research in Ophthalmology. The papers have previously been published in *Investigative Ophthalmology* (August, 1965), and the list of contributors reads like a Who's Who of Ophthalmological Research.

Biochemistry, today's most exciting and progressive field, has not by-passed the realm of ophthalmology. The entire Symposium is devoted to descriptions of recent advances and discoveries, including animal work on DNA and RNA metabolism, protein synthesis, glucose and glycoprotein metabolism, and ion transfer as controlled by various enzyme systems. One of the chapters includes some remarkable electronmicroscopy photographs of the human lens. There are discussions of the biochemical aspects of aging and development of senile, diabetic, and chemically-induced cataracts.

The introductory chapter on the historical perspective of cataract is most interesting and amusing. Any ophthalmologist would enjoy it. Such is not the case for the remainder of the Symposium; the intricacies of the methods used for measurement would be of interest only to those engaged in such investigation. Anyone not having had a refresher course in biochemistry in the past 5 years or who has not been engaged in recent biochemical research will find this work heavy going. The Symposium would seem to have been principally published for the benefit of those contributing to it. This book certainly should not be considered a must for every ophthalmologist's library, although those interested in biochemical research will find a wealth of information between the covers.

MERVIN H. ZIMMERMAN, M.D.

Therapeutic Radiology. Rationale, Technique, Results, 2nd ed. WILLIAM T. MOSS, M.D. With foreword by Lauren V. Ackerman, M.D. Price, $18.75. Pp. 514, with 170 illustrations. St. Louis: Mosby, 1965.

The second edition of this textbook, which was first copyrighted in 1959, indicates that it will and should be in print for many years as the standard basic work in this field.

It is not a recipe book for daily patient care. It is a collection of the current, conventional wisdom in the field of radiotherapy. Each anatomical organ or system is considered from the standpoint of radiation effect on the normal tissues. Tumors affecting each organ are classified and staged. The problems associated with treatment and the rationale for radiotherapy are documented with precision and clarity. All of the key references are included at the end of each chapter. The varying techniques are outlined in general. Finally, prognosis and results are discussed. A brief summary ends each chapter.

The reviewer's only regret as he reads this book is that it was not available during his own residency days.

MARTIN A. THOMAS, M.D.

Cardiac Evaluation in Normal Infants. The Clinical and Clinical Laboratory Differentiation Between Normal and Abnormal. ROBERT F. ZIEGLER, M.D. Price, $12.75. Pp. 170, illustrated. St. Louis, Mosby, 1965.

It is the author's intention to provide a text for the "uninitiated" so that the basic problem of differentiating between the normal and abnormal cardiovascular system during the first year of life can be better understood. This is indeed one of the most difficult periods to accurately assess the cardiovascular system. After reading the text, the "uninitiated" could not help but be more confused and bewildered.

At the outset the author gets into a semantic wrangle about what constitutes normal and abnormal. This constant conflict comes up throughout the text, and in the reviewer's opinion it is never resolved.

The chapter on Neonatal Physiology with regards to regression in the pulmonary vascular resistance is excessively overworked. Likewise, the relationships of the T waves in the right chest leads to the pulmonary artery pressure and resistance are repeated so many times that the reader becomes bored and wonders if perhaps some other pertinent facts need stressing.

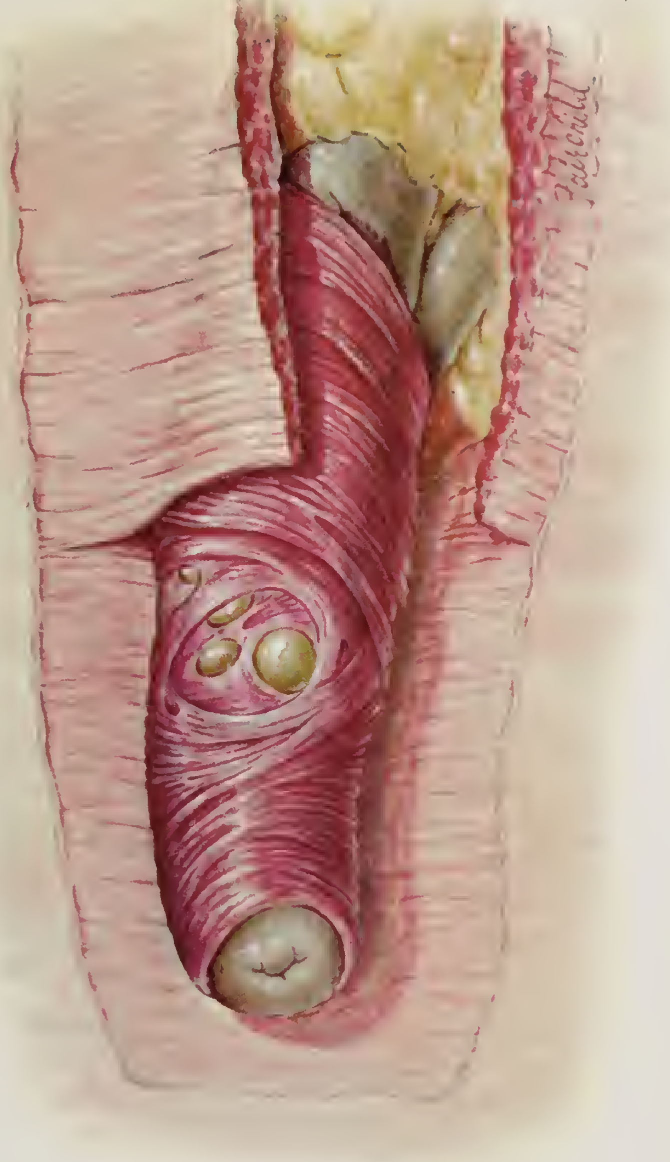
The text has a drawback inherent in many textbooks. In an attempt to be complete the author skims over topics without adequate explanation. For example, in the section on the Wolff-Parkinson-White syndrome the author in no way informs the "uninitiated" on how to make the electrocardiographic diagnosis.

One chapter is devoted to the evaluation of heart size by X-ray and electrocardiogram. Many good points are raised about the technical difficulties encountered in procuring a good chest X-ray. However, the value of a good X-ray examination is underestimated, whereas too much reliance is placed on the electrocardiogram. All too often infants with normal electrocardiograms die from severe congenital cardiac defects.

All in all, this book is disappointing and adds little to the excellent list of pediatric cardiology texts which have accumulated over recent years.

LEWIS P. SCOTT, M.D.

illustration after Boyden



HOW IMPORTANT IS THIS

IN YOUR DIAGNOSES OF SMOOTH MUSCLE SPASM?

PERHAPS VERY IMPORTANT

The sphincter of Oddi is made up primarily of smooth muscle fibers. It permits the gall bladder to fill, regulates the flow of bile and pancreatic enzymes and in dysfunction is a primary cause of Biliary Dyskinesia. The sphincter of Oddi is but one of five major foci of smooth muscle spasm where SPACOLIN® (Alverine citrate) acts directly with rapid onset and long duration. No neurotropic side effects because Spacolin is a musculotropic counter-spasmodic unrelated to atropine or atropine-like drugs. Spacolin is not contraindicated in prostatic hypertrophy.

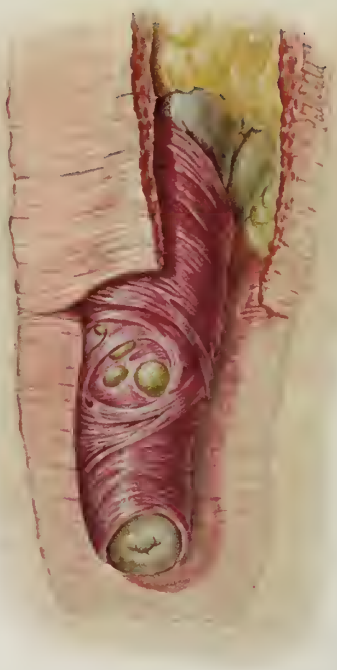
SPACOLIN® **(Alverine citrate)**

Each tablet contains: Alverine citrate .... 120 mg.

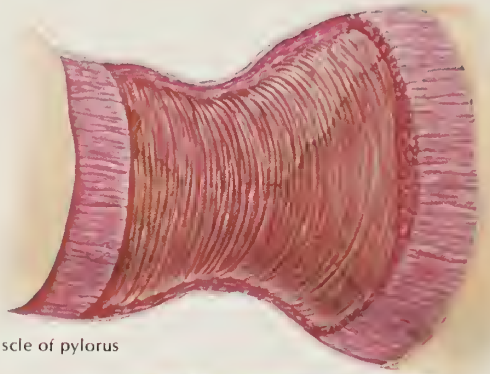
INDICATIONS: Smooth muscle spasmolytic for use in spastic colon, spastic conditions of the gastrointestinal tract, biliary dyskinesia, cholecystitis, spasm associated with peptic ulcer,* achalasia, pylorospasm, spasm attendant to diarrhea, spastic conditions of the genitourinary tract attributable to inflammation and calculi, certain primary dysmenorrheas and as an aid in cystoscopic, esophagoscopic and gastroscopic examinations. DOSAGE: One tablet after meals 1 to 3 times daily at discretion of physician. When treating spasm associated with peptic ulcer, achalasia or pylorospasm, administer tablets 1/2 hour before meals. In dysmenorrhea, one tablet 3 times daily starting at onset of discomfort. PRECAUTION: Caution is recommended when using in hypotensive patients. SIDE EFFECTS: In common with other smooth muscle depressants, Spacolin temporarily lowers blood pressure.

*Antacid and dietary measures are of primary importance in ulcer treatment and should not be neglected.

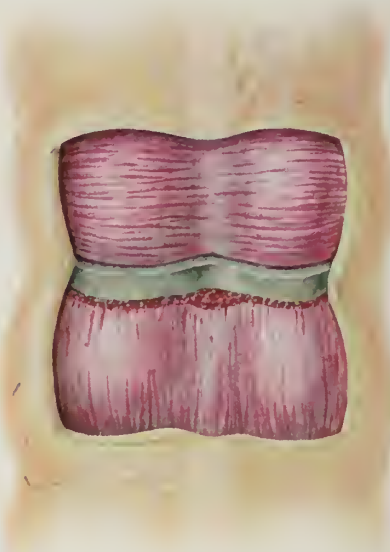
PHILIPS ROXANE LABORATORIES Division of Philips Roxane, Inc.,
Columbus, Ohio



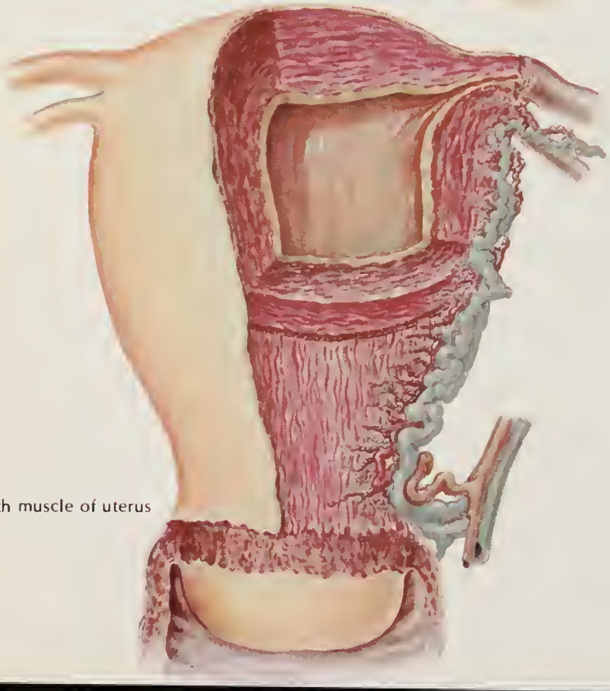
smooth muscle sphincter of Oddi



smooth muscle of pylorus

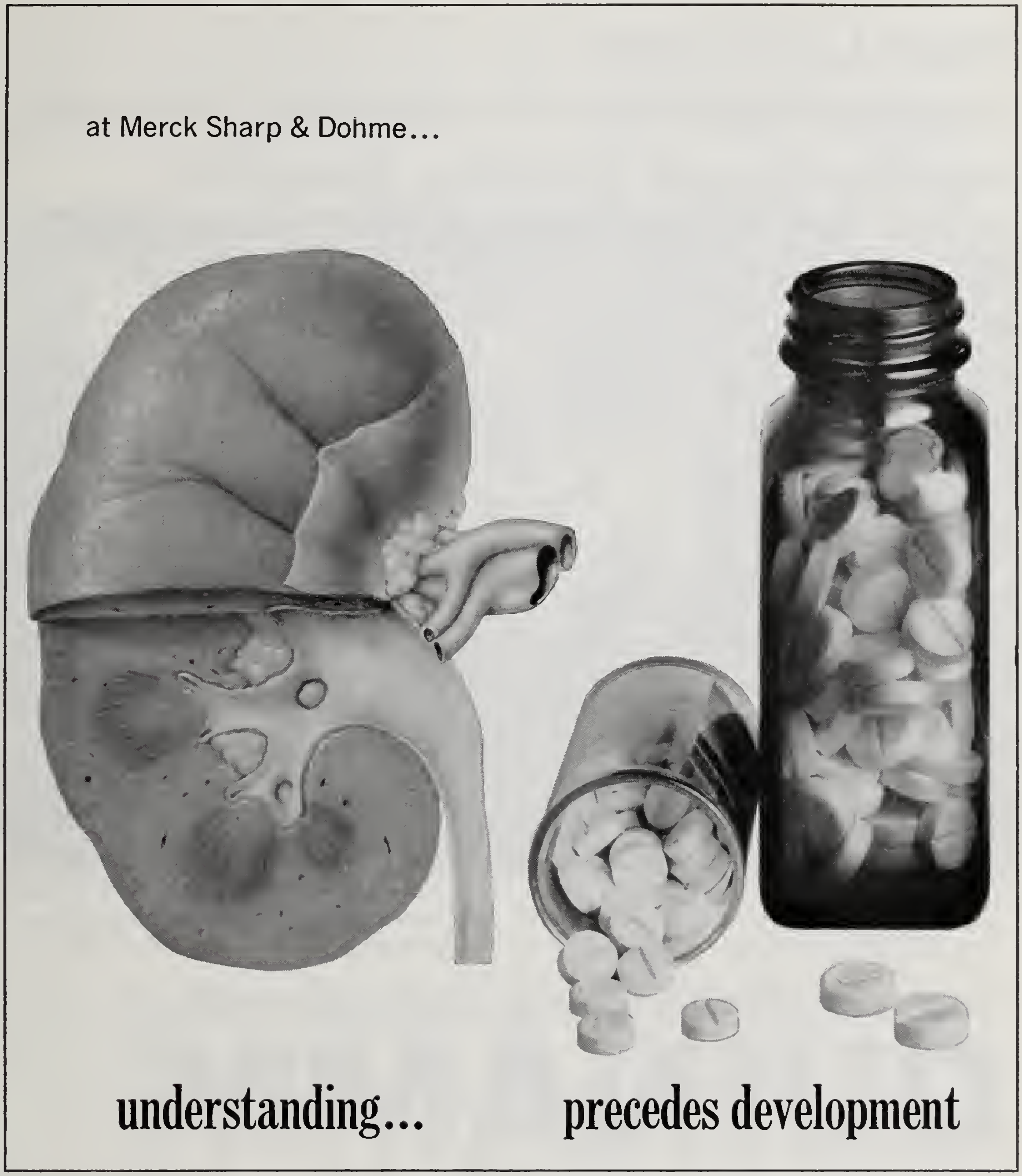


smooth muscle of colon



smooth muscle of uterus

smooth muscle of urinary bladder


at Merck Sharp & Dohme...
understanding...
precedes development

The development of chlorothiazide and probenecid were events of major importance, but perhaps even more important for the future was the Renal Research Program by which they were developed. When Merck Sharp & Dohme organized this program in 1943, it was expressing in action some of its basic beliefs about research:

• Many problems connected with renal structure and function were still undefined or unsolved. The Renal Research Program would begin its basic research in some of these problem areas.

• From knowledge thus acquired might come clues to the development of new therapeutic agents of significant value to the physician.

For example, the Renal Research Program put fifteen years into this search before chlorothiazide became available. But because these years had first led to a greater understanding of basic problems, the desired criteria for chlorothiazide existed before the drug was developed.

Along with other research teams at Merck Sharp & Dohme, the Renal Research Program continues to add new understanding of basic problems—understanding which will lead to important new therapeutic agents.

MSD MERCK SHARP & DOHME Division of Merck & Co., Inc., West Point, Pa.

where today's theory is tomorrow's therapy

Night Leg Cramps...
Frequent Bedfellow in Diabetes, Arthritis, and Peripheral Vascular Disorders*

*"Nocturnal cramps occurring in the calf muscles and small muscles of the feet have been encountered in a significant number of diabetic patients."[1]

"... nocturnal cramps may be the presenting symptoms of patients with arteriosclerosis obliterans, deep thrombophlebitis, varicose veins, osteoarthritis..."[2]

now... specific therapy for night leg cramps

QUINAMM™

Consistently effective, QUINAMM provided complete relief in 94% of 200 patients studied, many of whom were severe cases refractory to other medication.[3] Your prescription for one tablet at bedtime often controls painful night cramps with the initial dose... helps restore restful sleep.

QUINAMM Prescribing Information: Composition: quinine sulfate 250 mg. and aminophylline 200 mg. per tablet. **Precautions:** aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue if ringing in the ears, deafness, skin rash or visual disturbances occur. Since Quinamm contains quinine sulfate, caution should be observed regarding administration during pregnancy. Dosage: 1 tablet three or four times daily. For nocturnal leg cramps, 1 tablet on retiring.

References: 1. Shuman, C.: Am. J. Med. Sci., 225:54, 1953. 2. Perchuck, E., et al.: Angiology, 12:102, 1961. 3. Rawls, W., et al.: Med. Times, 87:818, 1959.

WALKER Laboratories Division of Richardson-Merrell Inc. Mt. Vernon, New York 10551

"Registered Nurses—For Private Duty"

U. S. EMPLOYMENT SERVICE

Professional Office

GRADUATE NURSES REGISTRY

Solar Building
1000 16th St., N.W.—Room 705
Washington, D. C. 20212

CALL—DISTRICT 7-1129

24-hour telephone service—
7 days a week

BEUCHLER'S

915-19th Street, N.W. Republic 7-6006

VISIT THESE
CONVENIENT RESIDENTIAL
COMMUNITIES FOR EXECUTIVES
AND PROFESSIONALS

built and sold by Gruver & Cooley
area builders for over 50 years

in Maryland:

Walnut Woods . . . take 70-S to Montrose Rd., right one block to Hitching Post Lane, right to Old Stage Rd., then right on Old Stage. Priced from $45,000.

Luxmanor . . . Take Old Georgetown Rd. north from 70-S for two blocks to New Lux Lane, turn left and follow the Luxmanor sign to Stephalee Lane. Priced from $58,000.

in Virginia:

Greenway Heights . . . from Beltway Exit 13 take Route 193 West for 2 miles to entrance on left, across from Madeira School. Priced from $52,000.

all open daily until dark

Gruver & Cooley
BUILDERS

5301 Wisconsin Ave., N.W. KE 7-1120
evenings and weekends call Mr. Stoner, EM 5-0867

KALORAMA
CONVALESCENT
HOME, INC.

Licensed by the D. C. Department of Licenses and Inspections

INSTITUTIONAL CARE

for the medical management of
the acute stages of alcoholism.

2001 KALORAMA ROAD
at 20th Street, N.W. Adams 2-0063

NURSES REGISTRY

EXPERIENCED UNDERGRADUATE
& PRACTICAL NURSES

Recommended by Physicians
At Your Service for Day or Night Duty
in Washington and nearby area

CALL—RAndolph 6-6706

THE GIBSON COMPANY

60 years serving the medical profession

922 19th Street, N.W.
Federal 8-2688

Medical and Surgical Supplies
Hospital, Invalid and Sickroom Supplies
Surgical Fitting Specialists—Man and Woman
Private Fitting Rooms

CLASSIFIED ADVERTISEMENTS

Advertisements under the following headings are charged at the rate of $5.00 for one insertion of 50 words or less; $4.00 each for three insertions; and $3.00 each for six insertions or more. All advertisements are payable in advance; the Editorial Board reserves the right to edit copy. Closing date for new copy, 15th of month preceding date of issue.

Classified advertisements of a professional nature are free to members.

SITUATIONS WANTED

PATHOLOGIST, Board-certified (PA), age 33, seeks position in Washington or environs. Research experience; University-trained; publications. Interested in providing small hospital coverage or part-time association with established pathologist. Address Box 60, 2007 Eye Street, N.W., Washington, D.C. 20006.

INTERNIST, 2 years hematology, age 33, military service completed, desires association or group practice opportunity in Washington, D.C. area beginning July 1966. Address Box 98, 2007 Eye Street, N.W., Washington, D.C. 20006.

INTERNIST, Board-eligible, available for part-time assistance with practice in office or house calls. Address Box 92, 2007 Eye Street, N.W., Washington, D.C. 20006.

PHYSICIANS WANTED

STAFF PHYSICIAN for medical publishing firm. Excellent opportunity for doctor who needs slower pace. Five-day week. Graduate Class A school, good command of English, foreign language desirable. Work largely administrative and supervisory. Partial disability not disqualifying. Send résumé to Box 77, 2007 Eye Street, N.W., Washington, D.C. 20006.

HOUSE OFFICERS: All positions in 380-bed Community Hospital. ECFMG necessary. Excellent salary. Contact Medical Director, THE MORRIS CAFRITZ MEMORIAL HOSPITAL, 1310 Southern Avenue, S.E., Washington, D.C. 20032.

PRACTICE FOR SALE

FOR SALE: Surgery practice of Dr. Edward A. Cafritz, deceased. For details contact DAVID HORNSTEIN, 901 Tower Building, Washington, D. C. 20005.

REAL ESTATE

FOR SALE: Attractive home-office in excellent location in Prince George's County. Corner lot with office entrance from off-street parking lot. Residence on street level. Bus stop at door. Ideal for general practitioner. Very favorable financing possible. Telephone Harrison 2-7748.

OFFICE SPACE AVAILABLE

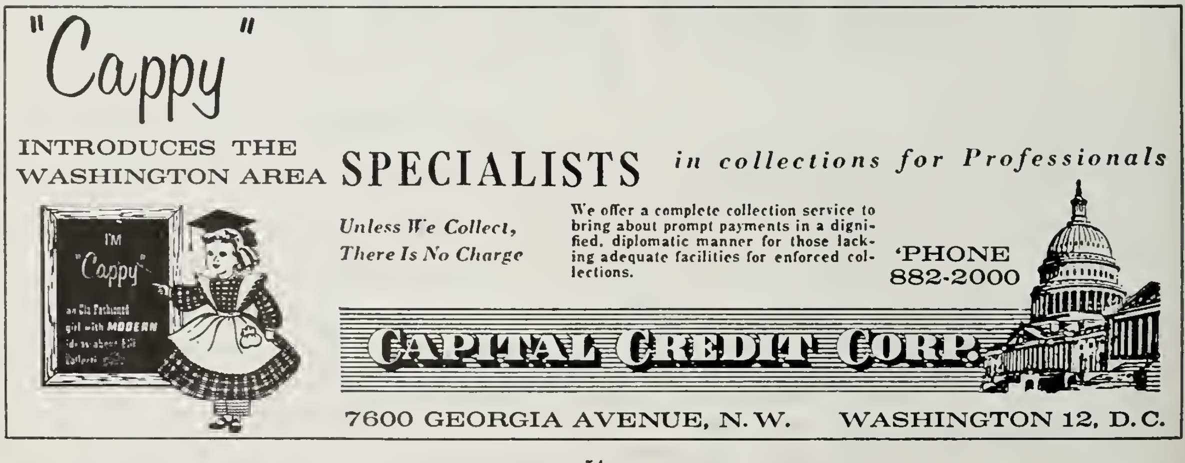
FOR RENT: One 3-room suite and adjacent 2-room suite at corner of 16th and T Streets, N.W. Will combine suites, if desired. Completely redecorated. Reasonable rent. Telephone 439-4452.

FOR RENT: Office suite suitable for physician, 1 block from Dupont Circle, on first floor. Occupied by podiatrist for past 8 years. Parking available. Telephone North 7-2546; evenings, Emerson 3-6837.

FOR RENT: PARKWOOD MEDICAL BUILDING, 1746 K Street, N.W.: office suite, approximately 500 sq. ft. Ideal for dentist, internist or podiatrist. Switchboard service. Rental below average area rental for same space. Telephone 296-4100, Suite 42.

FOR RENT: Office space ideally located at corner of 5500 Colorado Avenue, N.W. Approximately 1,200 sq. ft., newly remodeled, divided into 3 offices with each containing reception room, office, consultation and examining rooms. Air-conditioned. Reasonable rent. Telephone MR. FRANK BUAS, Randolph 3-6000.

FOR LEASE: GRESHAM MEDICAL OFFICES, 2833 Georgia Avenue, N.W., adjacent to Howard University campus. Very desirable 4-room suite with private lavatory and use of spacious reception foyer. Modern facilities; air-conditioned offices. Rental $195 month plus electricity. Contact CHARLES M. SCHNEIDER, Realtor, 927 15th Street, N.W., telephone 347-1679.



"Cappy"

INTRODUCES THE
WASHINGTON AREA **SPECIALISTS** *in collections for Professionals*

*Unless We Collect,
There Is No Charge*

We offer a complete collection service to bring about prompt payments in a dignified, diplomatic manner for those lacking adequate facilities for enforced collections.

'PHONE
882-2000

CAPITAL CREDIT CORP.

7600 GEORGIA AVENUE, N.W. WASHINGTON 12, D.C.

Classified Advertisements (*Continued*)

FOR LEASE: 4900 BUILDING on Indian Head Highway, Oxon Hill, Prince George's County, Md., in center of densely populated Glassmanor, Eastover, and Forest Heights areas. First and second floor space for immediate occupancy; new, air-conditioned building; private parking for 55 cars. Telephone GEO. S. KING CO., LU 4-2501.

FOR RENT: Premium office space; excellent location, 1 minute from Holy Cross Hospital in one of busiest traffic areas in town. Suite can be designed to specifications. For details inquire of DR. MILTON M. KOGAN, Juniper 5-3290.

TO SHARE: Internist will share 875 sq. ft. suite and facilities, designed for 2 specialists, in new, downtown medical office building. Ideal location and facilities for internist beginning practice. For further information telephone 298-6520.

TO SHARE: In NORTH BETHESDA MEDICAL PARK: very attractive offer, especially for young physician just beginning practice. Ample free parking. Address Box 32, 2007 Eye Street, N.W., Washington, D.C. 20007.

TO SHARE: Surgeon at 1150 Connecticut Avenue wishes to share office space. Separate consultation and examining rooms. Telephone Metropolitan 8-0387.

FOR RENT: Available in fall 1966, offices in new UNIVERSITY MEDICAL BUILDING now under construction at 2143 K Street, N.W. Suites custom-designed to meet needs of physicians and patients. Some choice locations still available. Telephone MR. MORRISON, Shannon & Luchs Company, 900 17th Street, N.W., 296-2345.

FOR RENT: NEW MEDICAL BUILDING, 1726 Eye Street, N.W. Ideal space available for general practitioner or specialist. Large suite for dentist also available. All utilities included plus switchboard service and central air-conditioning; parking available. Telephone 298-6936.

TO SHARE: Surgeon in modern medical building in suburban Virginia wishes to share offices; joint reception room, private consultation room. Address Box 30, 2007 Eye Street, N.W., Washington, D. C. 20006.

TO SUBLET: Internist's offices downtown, in modern building, beginning July. X-ray room included. Equipment available. Reasonable rent. Write or telephone DR. MAURICE A. SISLEN, 1712 Eye Street, N.W., Washington, D. C. 20006; telephone 298-8433.

Doctors

Office space available. Beautiful suites in a new luxury apartment hotel on Wisconsin Avenue, one block north of the District Line. Roof-top pool privileges plus secretarial service. Adequate parking.

HIGHLAND
HOUSE

5480 Wisconsin Avenue, Chevy Chase, Maryland

Phone 657-3600

PHYSICIANS'
PLACEMENT SERVICE

THE MEDICAL SOCIETY'S **Physicians' Placement Committee** maintains a service to benefit its members and other physicians by locating suitable openings, assistants or associates. It will also assist Government agencies and industrial organizations to secure physicians for their Medical Departments. Call 223-2230—ask for Mr. Trust.

Serving the Doctors of Metropolitan Washington
Since 1942

PROFESSIONAL BUSINESS MANAGEMENT, INC.

JOHN C. POST, *President*

A PERSONAL SERVICE DESIGNED TO ASSIST THE DOCTOR WITH THE BUSINESS SIDE OF MEDICAL PRACTICE.

• *Medical Management Specialists* •

1012 20th Street, N.W Washington, D.C. 20036 Tel. FEderal 8-3200

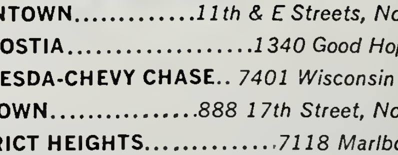
"It's a pleasure to save at the Half-Billion-Dollar Perpetual!"

"Size isn't everything . . . but it *is* nice to stand in the beautiful, spacious lobby of the big Perpetual and know I'm a shareholder! You see I've made it a habit to save *regularly* and the most practical time is on pay day . . . I just walk right over to Perpetual on my lunch hour. Perhaps you would find it more convenient to make your "savings date" on the first of the month . . . but surely by the 20th in order to receive a dividend for the full month. My savings—and yours—are *safe* at Perpetual. And your money earns steady, consistent dividends, credited quarterly."

PERPETUAL
BUILDING ASSOCIATION

Edward C. Baltz, President

ASSETS OVER $500,000,000 • ESTABLISHED 1881



DOWNTOWN............*11th & E Streets, Northwest*
ANACOSTIA..................*1340 Good Hope Road*
BETHESDA-CHEVY CHASE.. *7401 Wisconsin Avenue*
MIDTOWN...............*888 17th Street, Northwest*
DISTRICT HEIGHTS.............*7118 Marlboro Pike*
SILVER SPRING.............. *8700 Georgia Avenue*
PRINCE GEORGES *East-West Hgwy. at Belcrest Road*

FEDERAL SAVINGS AND LOAN INSURANCE CORPORATION
SAFETY OF YOUR SAVINGS INSURED UP TO $10,000

FEDERAL HOME LOAN BANK SYSTEM
MEMBER

INDEX OF ADVERTISERS

These Advertisers Support Your Journal.
Please Give Them Your Support.

Page

Bank

Riggs National Bank 4

Building & Loan Association

Perpetual Building Association 56

Business Counseling

Professional Business Management 55

Collection Agencies

Capital Credit Corporation 54
Credit Bureau 5

Equipment & Supplies

Accredited Surgical Sales 29
Beuchler's, Inc. 53
Gibson Company 53
Jobst Institute, Inc. 29
Nelson Kloman Surgical Supply Company 34

Funeral Home

S. H. Hines & Company 36

Home Builder

Gruver & Cooley 53

Insurance

Mutual of Omaha 3-C
Eugene F. Roesser 34
Russell, Marsh & Kennedy, Inc. 6

Investment Planning

Ferris & Company T-277

Nurse Registries

Association of Undergraduate and Practical Nurses Registry 53
Capital Nurse Registry 34
U. S. Employment Service for D. C. 53

Page

Office Space

Federal Building 7
Georgetown Doctors Park 16
Highland House 55
Pomponio Properties, Inc. 34
Shannon & Luchs Co 30

Pharmaceuticals

Ames Company 28
Armour Pharmaceutical Company 31–32
Bristol Laboratories 14–15
Burroughs Wellcome & Company 35
Cooper Tinsley Laboratories Inc. 11–12
Dorsey Laboratories T-279–282
Geigy Pharmaceuticals 10
Hynson, Westcott & Dunning, Inc. 3
Lakeside Laboratories, Inc. 39–45, 47
Lederle Laboratories T-290–291; 17, 27, 37, 58
Eli Lilly & Company 38
Merck, Sharp & Dohme, Division of Merck & Co., Inc. 51
Parke Davis & Company 2-C
Pfizer Laboratories 24–26
Philips Roxane Laboratories 49–50
Wm. P. Poythress & Company 19
A. H. Robins Company 21–23
Roche Laboratories 4-C
J. B. Roerig & Company 33
G. D. Searle & Company T-262–263
Smith, Kline & French Laboratories T-276
E. R. Squibb & Sons T-288
Walker Laboratories 52
Wallace Laboratories 8, 18
Winthrop Laboratories T-284

Pharmacies

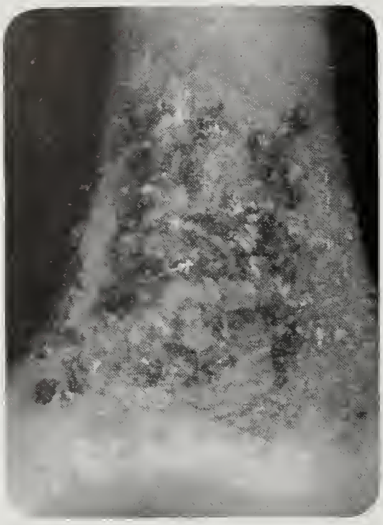
Higger's Drugs 34
Maxwell & Tennyson 29
Peoples Drug Stores 13

Sanitariums

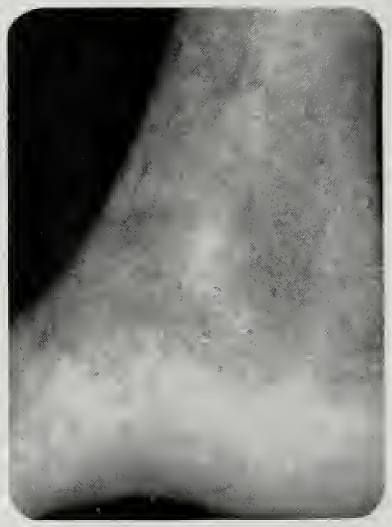
Kalorama Convalescent Home 53
Kensington Gardens Sanitarium 20

T–text

eczema: scourge of childhood



R. R., Age 11—Before treatment—
atopic eczema of long standing



After treatment—with ARISTOCORT
Topical Ointment 0.1% for two weeks

ARISTOCORT® Triamcinolone Acetonide Topicals have proved exceptionally effective in the control of various forms of childhood eczema: allergic, atopic, nummular, psoriatic, and mycotic.

In most cases responsive to topical ARISTOCORT, the 0.1% concentration is sufficiently potent. The 0.5% concentration provides enhanced topical activity for patients requiring additional potency for proper relief.

Administration and Dosage: Apply sparingly to the affected area 3 or 4 times daily. Some cases of psoriasis may be more effectively treated if the 0.1% Cream or Ointment is applied under an occlusive dressing.

Contraindications: Tuberculosis of the skin, herpes simplex, chicken pox and vaccinia.

Precautions and Side Effects: Do not use in the eyes or in the ear (if drum is perforated). A few individuals react unfavorably under certain conditions. If side effects are encountered, the drug should be discontinued and appropriate measures taken. Use on infected areas should be attended with caution and observation, bearing in mind the potential spreading of infection and the advisability of discontinuing therapy and/or initiating antibacterial measures. Generalized dermatological conditions may require systemic corticosteroid therapy. Steroid therapy, although responsible for remissions of dermatoses, especially of allergic origin cannot be expected to prevent recurrence. The use over extensive body areas, with or without occlusive nonpermeable dressings, may result in systemic absorption. Appropriate precautions should be taken. When occlusive nonpermeable dressings are used, miliaria, folliculitis and pyodermas will sometimes develop. Localized atrophy and striae have been reported with the use of steroids by the occlusive technique. When occlusive nonpermeable dressings are used, the physician should be aware of the hazards of suffocation and flammability. The safety of use on pregnant patients has not been firmly established. Thus, do not use in large amounts or for long periods of time on pregnant patients.

Packages: Tubes of 5 Gm. and 15 Gm.; ½ lb. jar.

PHOTOGRAPHS COURTESY OF M. M. NIERMAN, M.D.

Aristocort® Topical Ointment 0.1% and Cream 0.1%, 0.5%
Triamcinolone Acetonide
Also available in foam form and with neomycin.

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York

618-6

MEMO FROM . . .

to :

DR. "A"*
Administrator, Income Protection Plan,
Medical Society of the District of Columbia

"Thank you for relieving me of a financial burden"

Dr. "A", Washington, D.C., was mighty thankful he had the Medical Society's Income Protection Plan when he was disabled recently by an accident.

Mutual of Omaha, underwriter of the plan, sent Dr. "A" a check for $2,562.60, paying him benefits under his Medical Society coverage as well as the supplementary coverage he has had with Mutual of Omaha since 1932.

All told, Mutual of Omaha has paid Dr. "A" a total of $8,003.38 in benefits since 1955. These checks, covering three separate disabilities, have helped him meet his financial obligations when he was unable to carry on his practice.

On each occasion Dr. "A" has been completely satisfied with the manner in which his applications for benefits have been handled and said so in a recent letter to Mutual of Omaha.

To put it in his own words: "I feel that my best friend in time of need has been Mutual of Omaha."

Others Sing the Praises of Their Medical Society Protection Too:

Dr. "B"*
Laurel, Maryland

Since purchasing his Medical Society Income Protection Plan in 1953, Dr. "B" has been disabled five times. He has received benefit checks totaling $1,199.91. Says Dr. "B": "I can truly state that I am very satisfied with my policy with Mutual of Omaha and wish to express my sincere thanks."

Dr. "C"*
Washington, D. C.

When Dr. "C" received his benefit draft for $1,050.00 he commented that he was "most gratified to hear from Mutual of Omaha. Payment of sick benefits was made promptly, and was most appreciated at that time. I have nothing but praise for your organization and appreciate very much the privilege of holding a policy with you."

Dr. "D"*
Glenn Dale, Maryland

After receiving benefits five times for a total of $628.54, Dr. "D" has this to say about his Mutual of Omaha coverage: "I would not hesitate to recommend your company to any of my friends, and can understand why Mutual of Omaha was selected to underwrite the Medical Society's group plan."

These people know from experience the importance of protecting their most valuable asset—*their ability to earn an income*. How about you? Is your income protected? If not, contact your Medical Society's Insurance Administrator today. He'll be happy to give you full details on the Medical Society's own Income Protection Plan, the same outstanding coverage that has provided so much financial security to these, your fellow members, in time of sickness or accident. It's the only plan specifically designed for Medical Society members by MUTUAL OF OMAHA, the greatest name in health insurance.

Joseph E. Jones, Administrator
1666 Connecticut Avenue, N.W.
Washington, D. C. 20009
Tel. 483-3100

Mutual OF OMAHA

MAXIMUM BENEFITS MINIMUM COST ©

MUTUAL OF OMAHA INSURANCE COMPANY
Life Insurance Affiliate: United of Omaha
Home Office: Omaha, Nebraska

* Documented in the files of MUTUAL OF OMAHA

The weight of clinical evidence favors Librium

With Librium (chlordiazepoxide HCl), the weight of a five-year record of efficacy and safety in clinical use is supported by over 630 reports in the medical literature. Its virtually specific antianxiety action normally reduces disturbing emotional complaints promptly without compromising the patient's mental alertness or ability to perform normal functions. Decisive results are often seen in patients who had not improved on previously used psychotropic drugs.

In prescribing: Dosage—Adults: Mild to moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. Geriatric patients: 5 mg b.i.d. to q.i.d.

Side Effects: Side effects, usually dose-related, include drowsiness, ataxia, minor skin rashes, edema, menstrual irregularities, nausea and constipation. When treatment is protracted, blood counts and liver function tests are advisable. Paradoxical reactions may occasionally occur in psychiatric patients. Individual maintenance dosages should be determined.

Precautions: Advise patients against possibly hazardous procedures until maintenance dosage is established Though compatible with most drugs, use care in combining with other psychotropics, particularly MAO inhibitors or phenothiazines; warn patients of possibl combined effects with alcohol. Observe usual precaution in impaired renal or hepatic function, in long-term treatment and in presence of depression or suicidal tendencie Exercise caution in administering drug to addiction prone patients or those who might increase dosage; withdrawal symptoms, similar to those seen with barbiturate or meprobamate, can occur upon abrupt cessation afte prolonged overdosage. Caution should be exercised i prescribing any therapeutic agent for pregnant patient

Supplied: Capsules, 5 mg, 10 mg and 25 mg, bottles of 5

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc., Nutley, N.J. 07110

LIBRIUM®
(chlordiazepoxide HCl)

Librium is indicated whenever anxiety is part of the clinical profile, such as in...

Gastrointestinal disorders
Gynecologic disturbances
Environmental stress
Cardiovascular conditions

OPY 1

MEDICAL ANNALS of the DISTRICT OF COLUMBIA

SPLAY
IELVES

NATIONAL NAVAL MEDICAL CENTER NUMBER

June 1966 Vol. XXXV · No. 6

Live Measles Vaccine
Capt. A. M. Margileth, Lt. Comdr. G. W. Mella, and F. Di Moia, M.D.

Evaluation for Pulmonary Embolectomy
Lt. R. L. Piscatelli

Dilutional Partial Thromboplastin Time
Lt. Comdr. R. B. Moquin and Lt. Comdr. R. M. Ryan

Unusual Aspects of Pheochromocytoma
Comdr. J. Sode, Lt. J. E. Zimmerman, Lt. Comdr. D. O. Castell, and M. R. Powell, M.D.

Congenital Absence of Vagina
Lt. R. C. Northcutt and Lt. Comdr. P. B. Underwood, Jr.

Gastroduodenal Intussusception
Captain T. H. Wilson, Jr.

Tuberous Sclerosis: Part I
Lt. E. C. Gilbert, Lt. Comdr. M. Edson, and Lt. W. P. Urschel

Tuberous Sclerosis: Part II
Comdr. H. R. Noer and Lt. Comdr. S. D. Harmon

Therapy of Neurotic Symptom by "Desensitization"
Lt. Comdr. James J. Cavanagh

(Complete Index on page 5)

THE MEDICAL SOCIETY OF
THE DISTRICT OF COLUMBIA

2007 Eye Street Northwest

THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON
JUL 1966

Dilantin®
(diphenylhydantoin)

PARKE-DAVIS

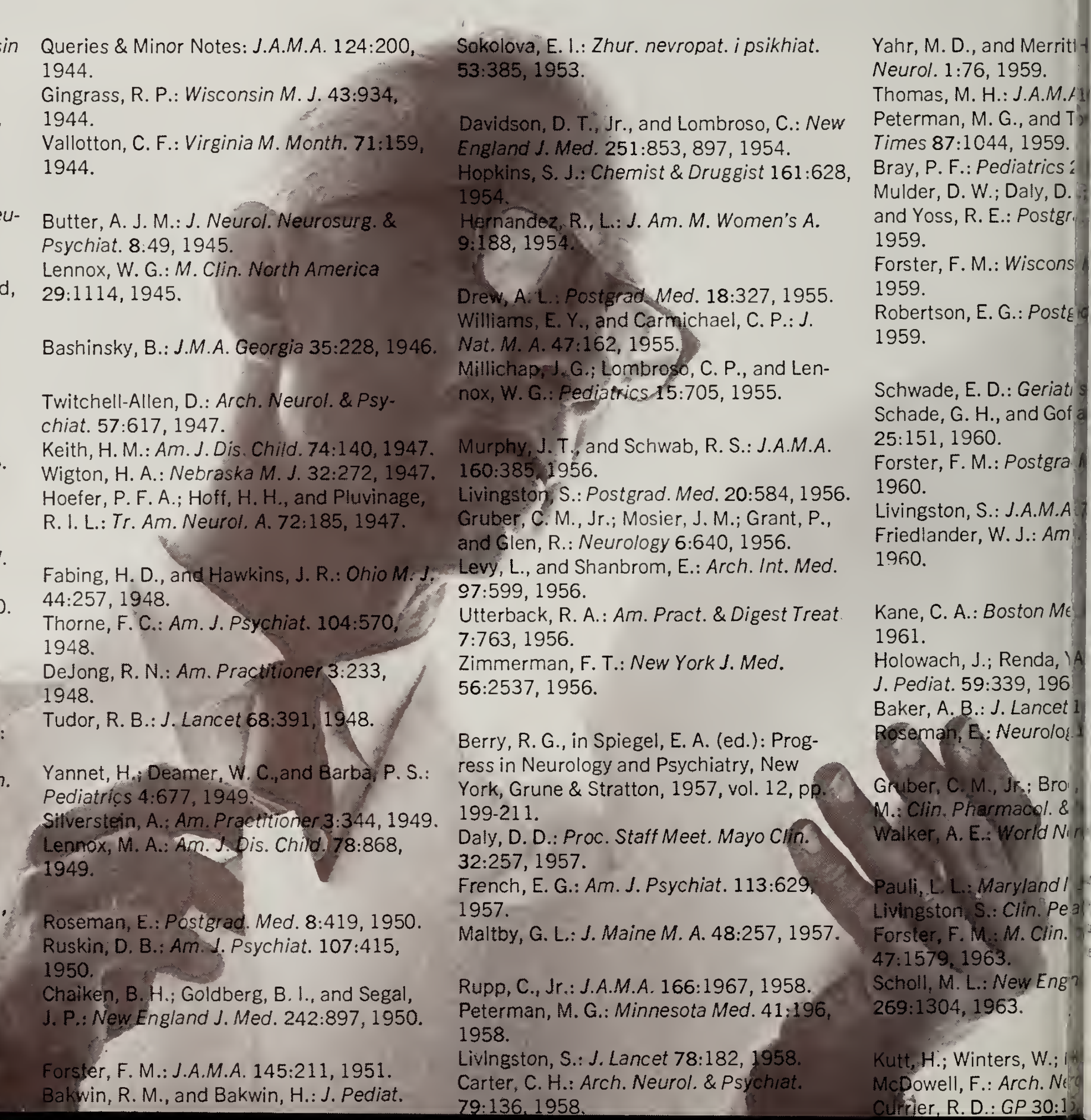
27 years of clinical use... and still the most widely prescribed agent of its kind

Complete information for usage available to physicians on request. 81966

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit, Michigan 48232

1866 1966 100th ANNIVERSARY



se, H. H.: *Wisconsin*
15:344, 1939.
n *M. Soc.* 38:317,
n, T. H.: *Ann. Int.*
am, T. J.: *Arch. Neu-*
, 1939.
. 85:986, 1939.
. L., Jr., and Arnold,
. 66:522, 1939.
ood, R.: *J.A.M.A.*
tt, C. L.: *Psychiat.*
hington Bull. 3:16.
tein, H. H.: *Am. J.*
0.
, V.: *Ann. Int. Med.*
.A.J. 43:157, 1940.
ne Med. Fac. 1:2,
es 69:461, 1941.
allenberger, D. W.:
, 1941.
ill. Veterans Admin.
1:178, 1941.
155:105, 1942.
. Psychiat. 98:515,
120:449, 1942.
sychiat. 99:231,
70:244, 1942.
ner, C.: *J. Nerv. &*
2.
f, A. J.: *J.A.M.A.*

Queries & Minor Notes: *J.A.M.A.* 124:200, 1944.
Gingrass, R. P.: *Wisconsin M. J.* 43:934, 1944.
Vallotton, C. F.: *Virginia M. Month.* 71:159, 1944.

Butter, A. J. M.: *J. Neurol. Neurosurg. & Psychiat.* 8:49, 1945.
Lennox, W. G.: *M. Clin. North America* 29:1114, 1945.

Bashinsky, B.: *J.M.A. Georgia* 35:228, 1946.

Twitchell-Allen, D.: *Arch. Neurol. & Psychiat.* 57:617, 1947.
Keith, H. M.: *Am. J. Dis. Child.* 74:140, 1947.
Wigton, H. A.: *Nebraska M. J.* 32:272, 1947.
Hoefer, P. F. A.; Hoff, H. H., and Pluvinage, R. I. L.: *Tr. Am. Neurol. A.* 72:185, 1947.

Fabing, H. D., and Hawkins, J. R.: *Ohio M. J.* 44:257, 1948.
Thorne, F. C.: *Am. J. Psychiat.* 104:570, 1948.
DeJong, R. N.: *Am. Practitioner* 3:233, 1948.
Tudor, R. B.: *J. Lancet* 68:391, 1948.

Yannet, H.; Deamer, W. C., and Barba, P. S.: *Pediatrics* 4:677, 1949.
Silverstein, A.: *Am. Practitioner* 3:344, 1949.
Lennox, M. A.: *Am. J. Dis. Child.* 78:868, 1949.

Roseman, E.: *Postgrad. Med.* 8:419, 1950.
Ruskin, D. B.: *Am. J. Psychiat.* 107:415, 1950.
Chaiken, B. H.; Goldberg, B. I., and Segal, J. P.: *New England J. Med.* 242:897, 1950.

Forster, F. M.: *J.A.M.A.* 145:211, 1951.
Bakwin, R. M., and Bakwin, H.: *J. Pediat.*

Sokolova, E. I.: *Zhur. nevropat. i psikhiat.* 53:385, 1953.

Davidson, D. T., Jr., and Lombroso, C.: *New England J. Med.* 251:853, 897, 1954.
Hopkins, S. J.: *Chemist & Druggist* 161:628, 1954.
Hernandez, R., L.: *J. Am. M. Women's A.* 9:188, 1954.

Drew, A. L.: *Postgrad. Med.* 18:327, 1955.
Williams, E. Y., and Carmichael, C. P.: *J. Nat. M. A.* 47:162, 1955.
Millichap, J. G.; Lombroso, C. P., and Lennox, W. G.: *Pediatrics* 15:705, 1955.

Murphy, J. T., and Schwab, R. S.: *J.A.M.A.* 160:385, 1956.
Livingston, S.: *Postgrad. Med.* 20:584, 1956.
Gruber, C. M., Jr.; Mosier, J. M.; Grant, P., and Glen, R.: *Neurology* 6:640, 1956.
Levy, L., and Shanbrom, E.: *Arch. Int. Med.* 97:599, 1956.
Utterback, R. A.: *Am. Pract. & Digest Treat.* 7:763, 1956.
Zimmerman, F. T.: *New York J. Med.* 56:2537, 1956.

Berry, R. G., in Spiegel, E. A. (ed.): Progress in Neurology and Psychiatry, New York, Grune & Stratton, 1957, vol. 12, pp. 199-211.
Daly, D. D.: *Proc. Staff Meet. Mayo Clin.* 32:257, 1957.
French, E. G.: *Am. J. Psychiat.* 113:629, 1957.
Maltby, G. L.: *J. Maine M. A.* 48:257, 1957.

Rupp, C., Jr.: *J.A.M.A.* 166:1967, 1958.
Peterman, M. G.: *Minnesota Med.* 41:196, 1958.
Livingston, S.: *J. Lancet* 78:182, 1958.
Carter, C. H.: *Arch. Neurol. & Psychiat.* 79:136, 1958.

Yahr, M. D., and Merritt
Neurol. 1:76, 1959.
Thomas, M. H.: *J.A.M.A.*
Peterman, M. G., and T
Times 87:1044, 1959.
Bray, P. F.: *Pediatrics*
Mulder, D. W.; Daly, D.
and Yoss, R. E.: *Postgr*
1959.
Forster, F. M.: *Wiscons*
1959.
Robertson, E. G.: *Postg*
1959.

Schwade, E. D.: *Geriat*
Schade, G. H., and Gof
25:151, 1960.
Forster, F. M.: *Postgra*
1960.
Livingston, S.: *J.A.M.A*
Friedlander, W. J.: *Am*
1960.

Kane, C. A.: *Boston Me*
1961.
Holowach, J.; Renda, Y
J. Pediat. 59:339, 196
Baker, A. B.: *J. Lancet*
Roseman, E.: *Neurolo*

Gruber, C. M., Jr.; Bro
M.: *Clin. Pharmacol. &*
Walker, A. E.: *World N*

Pauli, L. L.: *Maryland*
Livingston, S.: *Clin. Pe*
Forster, F. M.: *M. Clin.*
47:1579, 1963.
Scholl, M. L.: *New Eng*
269:1304, 1963.

Kutt, H.; Winters, W.;
McDowell, F.: *Arch. Ne*
Currier, R. D.: *GP* 30:1

to help restore and stabilize the intestinal flora

LACTINEX®

TABLETS & GRANULES

for fever blisters and canker sores of herpetic origin

LACTINEX contains a standardized viable mixed culture of *Lactobacillus acidophilus* and *L. bulgaricus* with the naturally occurring metabolic products produced by these organisms.

LACTINEX was introduced to help restore the flora of the intestinal tract in infants and adults.[1,2,3,4]

LACTINEX has also been shown to be useful in the treatment of fever blisters and canker sores of herpetic origin.[5,6,7,8]

No untoward side effects have been reported to date.

Literature on indications and dosage available on request.

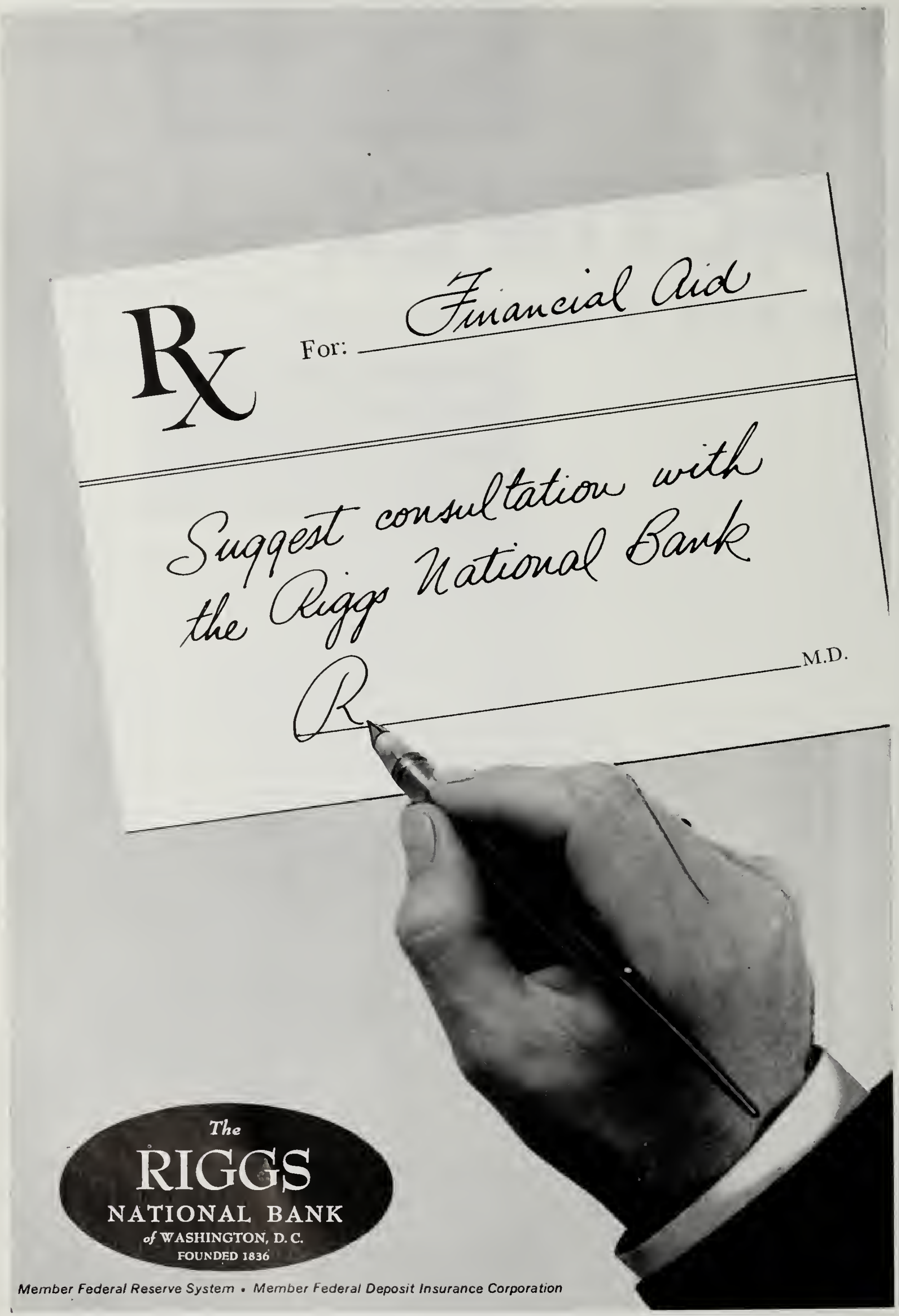
HYNSON, WESTCOTT & DUNNING, INC.

BALTIMORE, MARYLAND 21201

(LX03)

ferences: (1) Siver, R. H.: CMD, *21*:109, September 54. (2) Frykman, H. H.: Minn. Med., *38*:19-27, nuary 1955. (3) McGivney, J.: Tex. State Jour. Med., :16-18, January 1955. (4) Quehl, T. M.: Jour. of orida Acad. Gen. Prac., *15*:15-16, October 1965. (5) eekes, D. J.: N.Y. State Jour. Med., *58*:2672-2673, August 1958. (6) Weekes, D. J.: EENT Digest, *25*:47-59, December 1963. (7) Abbott, P. L.: Jour. Oral Surg., Anes., & Hosp. Dental Serv., 310-312, July 1961. (8) Rapoport, L. and Levine, W. I.: Oral Surg., Oral Med. & Oral Path., *20*:591-593, November 1965.

LX



℞ For: Financial Aid

Suggest consultation with the Riggs National Bank

R M.D.

The
RIGGS
NATIONAL BANK
of WASHINGTON, D. C.
FOUNDED 1836

Member Federal Reserve System • Member Federal Deposit Insurance Corporation

MEDICAL ANNALS

of the District of Columbia

EDITORIAL OFFICE:
2007 Eye Street, N.W., Washington, D.C. 20006
Telephone 223-2230

COPYRIGHT ©, 1966
BY THE MEDICAL SOCIETY
OF THE DISTRICT OF COLUMBIA

Yearly Subscription, $5.00
Single Number, 50¢

Second-class postage paid at Baltimore, Md.
Published monthly at
Mount Royal and Guilford Avenues,
Baltimore, Maryland 21202

Contents for June

NATIONAL NAVAL MEDICAL CENTER NUMBER

SCIENTIFIC ARTICLES

Live Measles Vaccine: Effect of Age and Preservative upon Seroconversion. *Captain A. M. Margileth, MC, USN, Lt. Comdr. G. W. Mella, MC, USN*, Bethesda, Md. *and F. Di Moia, M.D., Ph.D.*, West Point, Pa. 297

Evaluation for Pulmonary Embolectomy. *Lt. R. L. Piscatelli, MC, USN*, Bethesda, Md. 302

The Use of the Dilutional Partial Thromboplastin Time in the Detection of Potential Hypercoagulable States. *Lt. Comdr. Ross B. Moquin, MC, USN, and Lt. Comdr. Richard M. Ryan, MC, USN, with the technical assistance of Lawrence Klumpp. HN/USNR*, Bethesda, Md. 305

Some Unusual Aspects of Pheochromocytoma: Report of Four Cases. *Comdr. J. Sode, MC, USN, Lt. J. E. Zimmerman, MC, USN, Lt. Comdr. D. O. Castell, MC, USN*, Bethesda, Md., *and M. R. Powell, M.D.*, Berkeley, Calif. 310

Congenital Absence of the Vagina: Embryology, Diagnosis, and Management. Report of Five Cases. *Lt. Robert C. Northcutt, MC, USNR, and Lt. Comdr. Paul B. Underwood, Jr., MC, USNR*, Bethesda, Md. 316

Gastroduodenal Intussusception: Report of a Case. *Captain T. H. Wilson, Jr., MC, USN*, Bethesda, Md. 320

Tuberous Sclerosis. Part I. Tuberous Sclerosis Associated with Bilateral Renal Hamartomas: Report of a Case. *Lt. Edward C. Gilbert, MC, USN, Lt. Comdr. Mitchell Edson, MC, USN*, Bethesda, Md., *and Lt. William P. Urschel, MC, USN*, Newport, R.I. 322

Tuberous Sclerosis. Part II. Skeletal Changes in Tuberous Sclerosis. *Comdr. H. R. Noer, MC, USN*, Washington, *and Lt. Comdr. S. D. Harmon, MC, USN*, Bethesda, Md. 324

Therapy of a Neurotic Symptom by "Desensitization": Report of a Case. *Lt. Comdr. James J. Cavanagh, MC, USN*, Washington 326

(*Continued on page 6*)

ONLY ONE FIRM CAN PROVIDE ALL THESE SERVICES, OR ANY ONE OF THEM...

- A complete low-cost patient billing service
- Confidential information on every account
- An ethical and effective collection service
- A dignified pre-collection service
- Professional accounts receivable consultation

THE CREDIT BUREAU, INC.

FOUR OFFICES TO SERVE YOU LOCALLY

WASHINGTON, D.C.; ROCKVILLE, MD.; FAIRFAX, VA.; ALEXANDRIA, VA.

3,000 CLOSELY ASSOCIATED AGENCIES THROUGHOUT THE COUNTRY

Call Now to Arrange an Appointment with Our Representative

ASSOCIATED CREDIT BUREAUS OF AMERICA, INC. MEDICAL CREDITS DIVISION

ED GARRETSON NAtional 8-0680

Contents for June

(Continued)

EDITORIALS

Glaucoma Screening Clinics 330

Contact Lenses and Unconscious Patients 330

Dispensing the Sample 331

MISCELLANY

Clinical Research Center at Children's Hospital 304

President's Page: Relative Value Scale 327

If the Shoe Fits . . . 331

The First National Congress on Medical Ethics. *Lewis H. Biben, M.D.*, Washington 335

Georgetown Affiliates with Providence Hospital in Educational Program 336

Observations on AMA Air Pollution Medical Research Conference. *Francis Silver V, P. E.*, Martinsburg, West Va. 337

Health Dept. Notes: Area C Mental Health Center. *Murray Grant, M.D., D.P.H.*, Washington 339

News and Personals 341

Letters to the Editor: Physicians' Teaching Services Lauded 346

Obituaries 346

Medical Annals Staff and Officers of Medical Society *Adv. 23*

Book Reviews *Adv. 28*

National and Regional Meetings *Adv. 41*

Classified Advertisements *Adv. 48*

Index of Advertisers *Adv. 51*

INSURANCE FOR THE DOCTOR

***PROFESSIONAL LIABILITY**

OFFICE PUBLIC LIABILITY

LOW COST TERM LIFE INSURANCE

and

EMPLOYEES WORKMEN'S COMPENSATION
EQUIPMENT FLOATER
FIRE INSURANCE CONTENTS
BUSINESS EXPENSE DISABILITY
BONDS ON EMPLOYEES
AUTOMOBILE INSURANCE
ANNUITIES—FIXED & VARIABLE
NON-CAN DISABILITY INCOME
PENSION PLANS FOR DOCTORS
PENSION PLANS FOR EMPLOYEES

$1,000,000 CATASTROPHE LIABILITY

* endorsed by the Medical Society of the District of Columbia

Russell, Marsh & Kennedy, Inc.

WILLIAM G. RUSSELL
President

5151 Wisconsin Ave., N.W.
Telephone: 244-7600

Nitroglycerin
lladonna
Paregoric
Codeine
Cortisone
Aspirin
Digitalis
Vitamins
Penicillin
Miltown®

An eminent role in medical practice

- Clinicians throughout the world consider meprobamate a therapeutic standard in the management of anxiety and tension.
- The high safety-efficacy ratio of 'Miltown' has been demonstrated by more than a decade of clinical use.

Miltown®
(meprobamate)

Indications: 'Miltown' (meprobamate) is effective in relief of anxiety and tension states. Also as adjunctive therapy when anxiety may be a causative or otherwise disturbing factor. Although not a hypnotic, 'Miltown' fosters normal sleep through both its antianxiety and muscle-relaxant properties.

Contraindications: Previous allergic or idiosyncratic reactions to meprobamate or meprobamate-containing drugs.

Precautions: Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of preexisting symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side effects: Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone [illegible] rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Usual adult dosage: One or two 400 mg. tablets three times daily. Doses above 2400 mg. daily are not recommended.

Supplied: In two strengths: 400 mg. scored tablets and 200 mg. coated tablets.

Before prescribing, consult package circular.

WALLACE LABORATORIES

Save . . .

**at National
Permanent,
one of the area's
oldest and
largest Savings
and Loan
Associations**

CURRENT
DIVIDEND RATE
4¼%
PER ANNUM

INSURED

**NATIONAL
PERMANENT
SAVINGS
AND LOAN ASSOCIATION**
Founded 1890

MAIN OFFICE
14th & G Streets, N.W.
CONNECTICUT AVE. AT K ST.
1000 Connecticut Ave.
CHEVY CHASE
5700 Connecticut Ave.
LANGLEY PARK, MD.
7633 New Hampshire Ave.

ASSETS OVER $150,000,000.00

Bamadex® Sequels®

Contraindications: In hyperexcitability and in agitated prepsychotic states. Previous allergic or idiosyncratic reactions.

Precautions: Use with caution in patients hypersensitive to sympathomimetic compounds, who have coronary or cardiovascular disease, or are severely hypertensive.

Dextro-amphetamine sulfate: Use by unstable individuals may result in psychological dependence.

Meprobamate: Careful supervision of dose and amounts prescribed is advised; especially for patients with known propensity for taking excessive quantities of drugs. Excessive and prolonged use in susceptible persons, e.g. alcoholics, former addicts, and other severe psychoneurotics, has been reported to result in dependence. Where excessive dosage has continued for weeks or months, reduce dosage gradually. Sudden withdrawal may precipitate recurrence of pre-existing symptoms such as anxiety, anorexia, or insomnia; or withdrawal reactions such as vomiting, ataxia, tremors, muscle twitching and, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, reduce dose—operation of motor vehicles, machinery or other activity requiring alertness should be avoided. Effects of excessive alcohol consumption may be increased by meprobamate. Appropriate caution is recommended with patients prone to excessive drinking. In patients prone to both petit and grand mal epilepsy meprobamate may precipitate grand mal attacks. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side Effects: Overstimulation of the central nervous system, jitteriness and insomnia or drowsiness.

Dextro-amphetamine sulfate: Insomnia, excitability, and increased motor activity are common and ordinarily mild side effects. Confusion, anxiety, aggressiveness, increased libido, and hallucinations have also been observed, especially in mentally ill patients. Rebound fatigue and depression may follow central stimulation. Other effects may include dry mouth, anorexia, nausea, vomiting, diarrhea, and increased cardiovascular reactivity.

Meprobamate: Drowsiness may occur and can be associated with ataxia, the symptom can usually be controlled by decreasing the dose, or by concomitant administration of central stimulants. Allergic or idiosyncratic reactions: maculopapular rash, acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever, transient leukopenia. A case of fatal bullous dermatitis, following administration of meprobamate and prednisolone, has been reported. Hypersensitivity has produced fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, stomatitis, proctitis (1 case), anaphylaxis, agranulocytosis and thrombocytopenic purpura, and a fatal instance of aplastic anemia, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity, usually after excessive dosage. Impairment of visual accommodation. Massive overdosage may produce drowsiness, lethargy, stupor, ataxia, coma, shock, vasomotor, and respiratory collapse.

30
BAMADEX
DEXTROAMPHETAMINE SULFATE
WITH MEPROBAMATE
SEQUELS
Sustained Release Capsules
077 619

First aid for a button popper

Second aid for a button popper

Bamadex® Sequels®

d-amphetamine sulfate (15 mg.) and meprobamate (300 mg.) Sustained Release Capsules

By providing combined anorexigenic-tranquilizing action, BAMADEX SEQUELS Capsules help your nonshrinking patients to establish new patterns of eating less. The amphetamine component suppresses the appetite, while the meprobamate helps allay nervousness and tension. And for most patients, the *sustained* release of the active ingredients makes possible convenient one-capsule-a-day dosage.

LEDERLE LABORATORIES • A Division of American Cyanamid Company, Pearl River, New York Lederle
6655

New
low-cost tetracycline/antifungal therapy

for broad-spectrum activity
plus specific antifungal prophylaxis
at significant patient savings

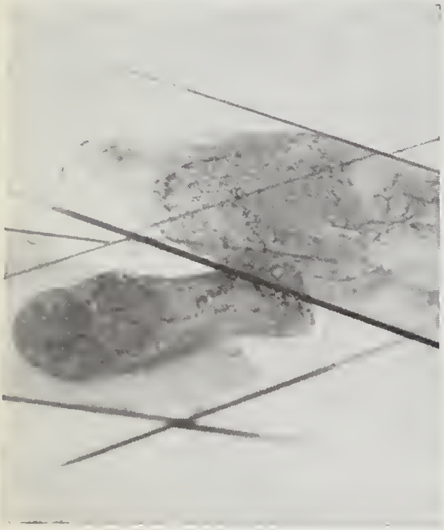
Whenever tetracycline is indicated in these candidates for Candida:

. diabetic patients

2. nonpregnant women with a history of recent or recurrent monilial vaginitis

3. elderly or debilitated patients

4. patients with a past history of moniliasis



5. patients on long-term tetracycline or corticosteroid therapy

BRISTOL THERAPEUTIC SUMMARY: For complete information consult Official Package Circular. *Indications:* Infections of respiratory, gastrointestinal and genitourinary tracts and skin and soft tissues due to tetracycline-sensitive organisms, in patients with increased susceptibility to monilial infections. *Contraindications:* The drug is contraindicated in patients hypersensitive to its components. *Warnings:* Photodynamic reactions have been produced by tetracyclines. Natural and artificial sunlight should be avoided during therapy. Stop treatment if skin discomfort occurs. No cases of photosensitivity have been reported with Tetrex (tetracycline phosphate complex). With renal impairment, systemic accumulation and hepatotoxicity may occur. In this situation, lower doses should be used. Tooth staining and enamel hypoplasia may be induced during tooth development (last trimester of pregnancy, neonatal period and childhood). *Precautions:* Bacterial superinfection may occur. Infants may develop increased intracranial pressure with bulging fontanels. In gonorrheal therapy, serologic tests for syphilis should be conducted initially and monthly for 3 months. *Adverse Reactions:* Glossitis, stomatitis, nausea, diarrhea, flatulence, proctitis, vaginitis, dermatitis, and allergic reactions may occur. *Usual Adult Dosage:* 1 capsule *q.i.d.* Continue therapy for 10 days in beta-hemolytic streptococcal infections. Administer one hour before or 2 hours after meals. *Supply:* Capsules, bottles of 16. Each capsule contains tetracycline phosphate complex equivalent to 250 mg. tetracycline HCl activity and 250,000 units of nystatin.

BRISTOL

BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York

Tetrex-F®

Each capsule contains tetracycline phosphate complex equivalent to tetracycline hydrochloride 250 mg. and nystatin 250,000 units.

Tetrex-F is priced lower
than most
tetracycline-antifungal products

Soyalac SOLVES THE PROBLEM

...and BABY APPROVES!

Baby has a thing or two to say about a hypo-allergenic, milk-free diet!

Soyalac is the good-tasting, fibre-free formula that infants readily accept. The exclusive Soyalac process results in a consistency much like milk, with a light, creamy color—and nut-like flavor but without a trace of sediment.

Soyalac satisfies the infant. Strikingly similar to mother's milk, it provides protein of high biologic value and balanced nutrients. Clinical data furnish evidence of Soyalac's excellence in promoting normal growth and development.

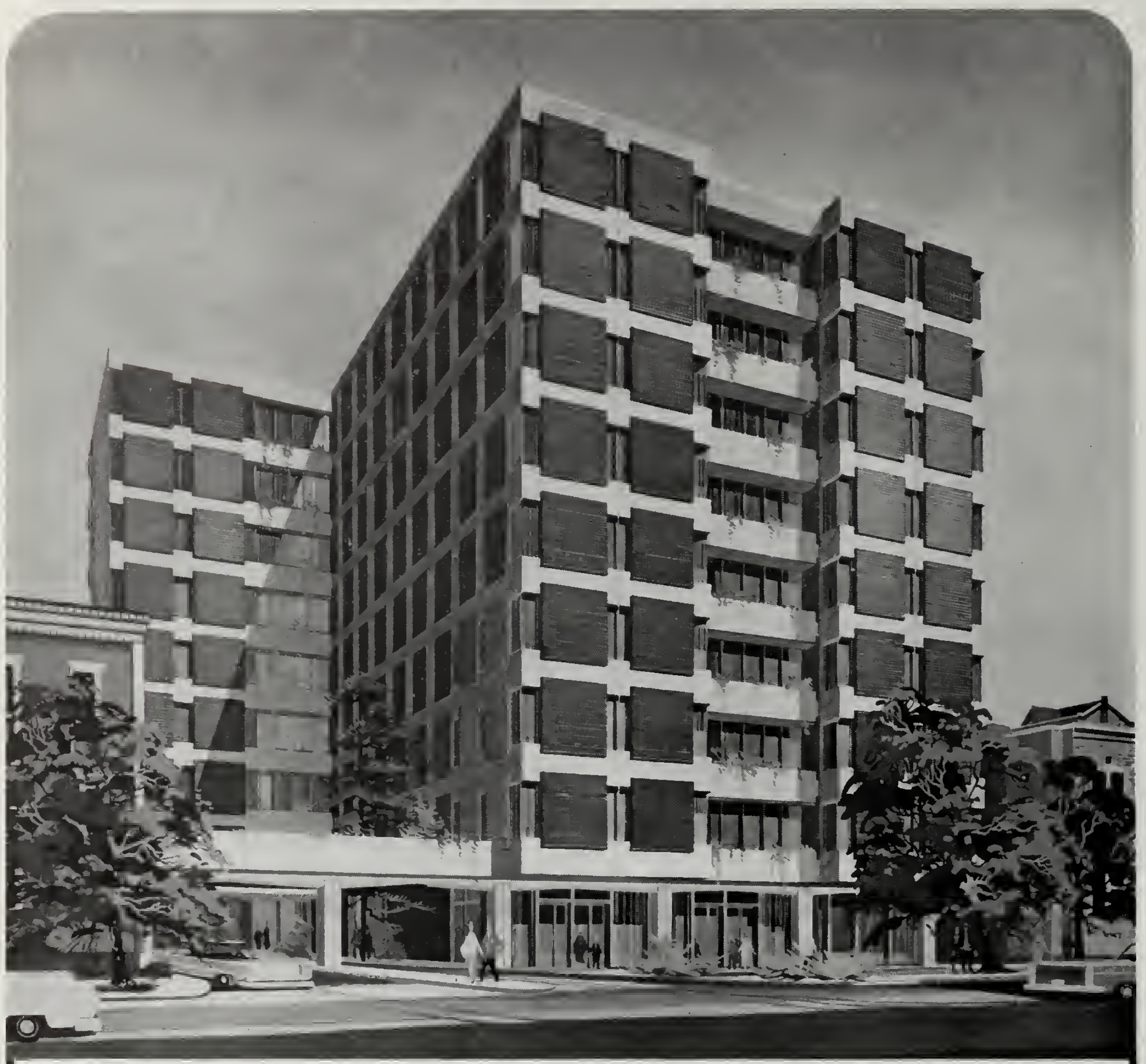
Loma Linda
Soyalac
CONCENTRATED
LIQUID
Hypoallergenic
For Infants
Children and Adults

Free Booklet and Samples

A request on your professional letterhead or prescription form will bring to you complete information and a supply of samples.

Soyalac

a product of
LOMA LINDA FOODS
MEDICAL PRODUCTS DIVISION
RIVERSIDE, CALIFORNIA
Mount Vernon, Ohio, U. S. A.



UNIVERSITY

MEDICAL BUILDING

2143 K STREET, N.W.
OCCUPANCY FALL 1966

ADJACENT TO GEORGE WASHINGTON UNIVERSITY HOSPITAL
SEVERAL CHOICE SUITES AVAILABLE IN WASHINGTON'S NEWEST MEDICAL BUILDING
CUSTOM DESIGNED FOR YOUR REQUIREMENTS

SHANNON · & · LUCHS
Realtors Since 1906

900 SEVENTEENTH STREET, N.W.

CALL MR. MORRISON
296-2345

following infection

B and C vitamins are therapy: STRESSCAPS B and C vitamins in therapeutic amounts...help the body mobilize defenses during convalescence...aid response to primary therapy. The patient with a severe infection, and many others undergoing physiologic stress, may benefit from STRESSCAPS capsules.

STRESSCAPS

Stresscaps®

Stress Formula Vitamins Lederle

FOR PROFESSIONAL RECOMMENDATION ONLY

Each capsule contains:

Vitamin B_1 (as Thiamine Mononitrate)	10 mg
Vitamin B_2 (Riboflavin)	10 mg
Vitamin B_6 (Pyridoxine HCl)	2 mg
Vitamin B_{12} Crystalline	4 mcgm
Vitamin C (Ascorbic Acid)	300 mg
Niacinamide	100 mg
Calcium Pantothenate	20 mg

Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York Lederle

626-6—3612

anxiety of the empty years

Although still a handsome woman, she can no longer count on youth. She feels unwanted by her maturing children and advancing years create an abnormal sense of dread.

Since her problem is basically emotional, Vistaril can help her . . . because Vistaril calms smoothly, helps her gain perspective without inducing the euphoria or psychic overgratification that fosters habituation.

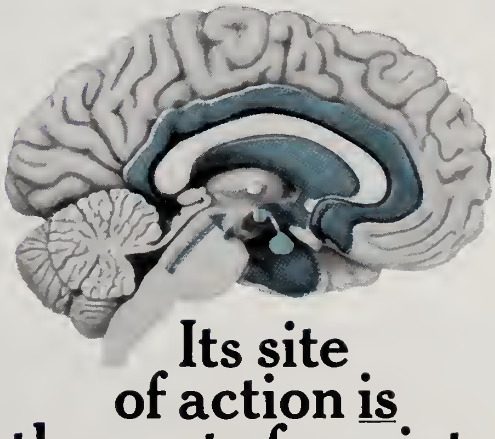
What is Vistaril? Vistaril is hydroxyzine, a tranquilizer entity totally different from the diazepines, meprobamates and the phenothiazines. While equal to the diazepines and meprobamates in effectiveness, Vistaril has been associated with remarkably few of the unwanted psychic and somatic reactions seen with other tranquilizing agents because its primary effect is exerted at the seat of anxiety.

Vistaril tranquilizes with less complication than do the phenothiazines. Deleterious effects, such as hepatotoxicity, blood dyscrasias, skin pigmentation, and opacities of lens and cornea, are not characteristic of Vistaril activity.

Vistaril tranquilizes with less complication than do the diazepines and meprobamate. Withdrawal symptoms, possible psychotropic drug incompatibilities, blood dyscrasias and hepatotoxicity, reported with diazepines and meprobamate, are not characteristic of Vistaril.

No other tranquilizer is as precise, as uncomplicated, as Vistaril®

(HYDROXYZINE)



Its site of action is the seat of anxiety

Pfizer Since 1849

Science for the world's well-being®

Turn page for brief summary...

The record of hydroxyzine experience:

Eight years of clinical effectiveness, over 1,000,000,000 doses prescribed, more than 500 published papers covering nearly 15,000 patients...

Contraindications: Hypersensitivity to hydroxyzine. The parenteral solution, for intramuscular or intravenous use, *must not* be injected subcutaneously or intra-arterially.

Precautions: Hydroxyzine may potentiate the action of central nervous system depressants. In conjunctive use, dosage for these drugs should be decreased. Because drowsiness may occur, patients should be cautioned against driving a car or operating dangerous machinery. The usual precautions for intramuscular injection should be followed; soft-tissue reactions have rarely been reported when proper technique has been used. On reported intravenous injection a few instances of digital gangrene have occurred distal to the injection site, considered to be due to inadvertent intra-arterial injection or periarterial extravasation. Therefore, particular caution should be observed to insure injection only into intact veins; avoid either intra-arterial injection or extravasation. Intravenous administration should be accomplished slowly, no faster than 25 mg. per minute, and not to exceed 100 mg. in any single dose.

Adverse Reactions: Drowsiness may occur; if so, it is usually transitory and may disappear in a few days of continued therapy or upon dosage reduction. Dryness of the mouth may be seen with higher doses. Involuntary motor activity has been reported in some hospitalized patients on higher than recommended dosage.

Supply: Vistaril (hydroxyzine pamoate) Capsules: 25 mg., 50 mg., 100 mg. Vistaril (hydroxyzine pamoate) Oral Suspension: 25 mg. per 5 cc. Vistaril (hydroxyzine HCl) Parenteral Solution: 25 mg./cc.—10-cc. vials, and 50 mg./cc.—2-cc. and 10-cc. vials.

More detailed professional information available on request.

The Vistaril site of action is the seat of anxiety

No other tranquilizer is as precise, as uncomplicated, as Vistaril®
(HYDROXYZINE)

Science for the world's well-being®
Pfizer
Since 1849

PFIZER LABORATORIES
DIVISION, CHAS. PFIZER & CO., INC. NEW YORK, N.Y. 10017

the mid-rift!

Our population's bursting at the seams.

It's eat. Eat. Eat.

And then diet. Diet. Diet.

With the latest No-calorie.
No carbohydrate. No-vitamin. No exercise.
400-hour Kamikaze Plan!

When it's over, it's eat, eat, eat again.

As a professional you can help wrest some sense from this nonsense: first, by cautioning against skipping meals, and second by pointing the way to realistic weight control through nourishing meals every day. Day after day.

Naturally, balanced diets and nourishing, palatable dairy foods go together; they always have.

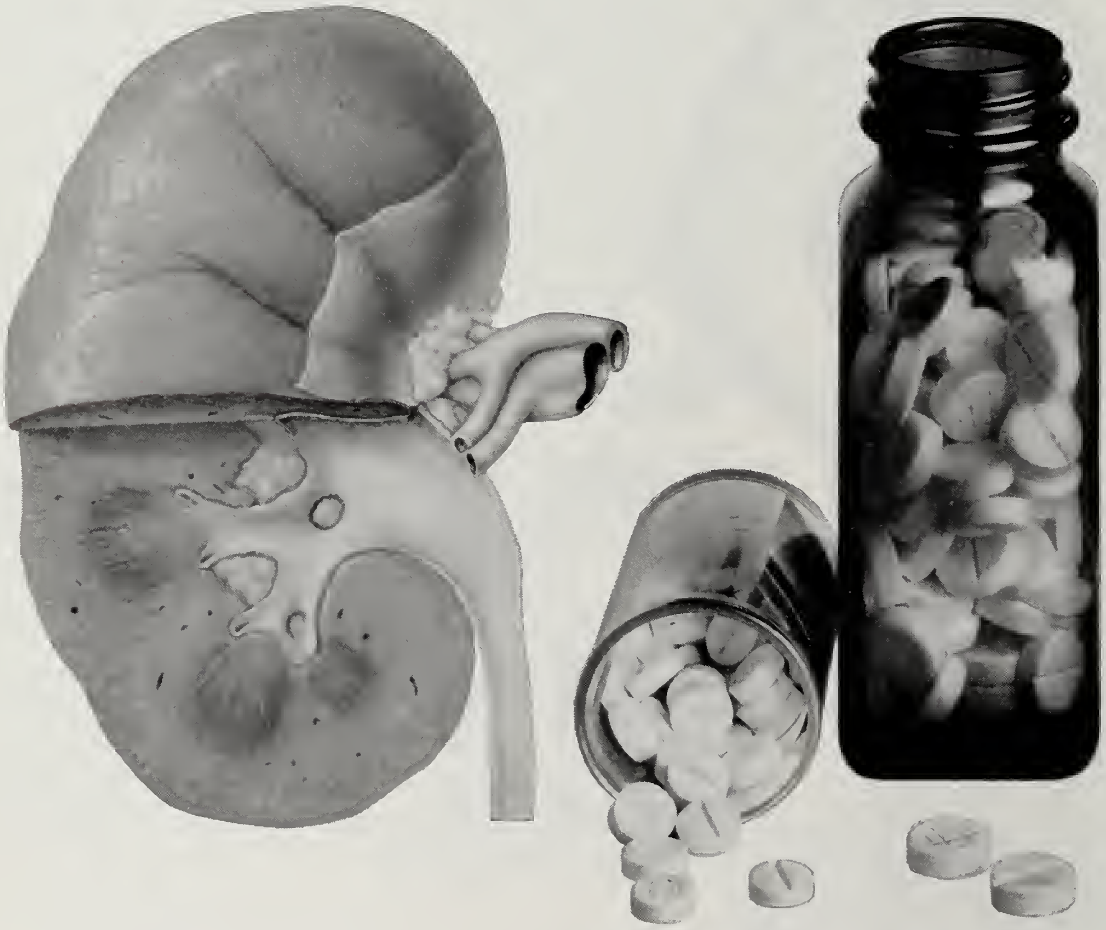
Project Weight Watch has been initiated to assist you. Its scope is nationwide, its purpose is to focus professional attention on the problem.

To help you translate your concern to your patients, a portfolio of materials is available. Send for it. Help stamp out needless waist.

Dairy Council of Greater Metropolitan
Washington D. C.
1511 K Street, N. W.
Washington, D. C. 20005

PROJECT
WEIGHT
WATCH

at Merck Sharp & Dohme...



understanding... precedes development

The development of chlorothiazide and probenecid were events of major importance, but perhaps even more important for the future was the Renal Research Program by which they were developed. When Merck Sharp & Dohme organized this program in 1943, it was expressing in action some of its basic beliefs about research:

- Many problems connected with renal structure and function were still undefined or unsolved. The Renal Research Program would begin its basic research in some of these problem areas.
- From knowledge thus acquired might come clues to the development of new therapeutic agents of significant value to the physician.

For example, the Renal Research Program put fifteen years into this search before chlorothiazide became available. But because these years had first led to a greater understanding of basic problems, the desired criteria for chlorothiazide existed before the drug was developed.

Along with other research teams at Merck Sharp & Dohme, the Renal Research Program continues to add new understanding of basic problems—understanding which will lead to important new therapeutic agents.

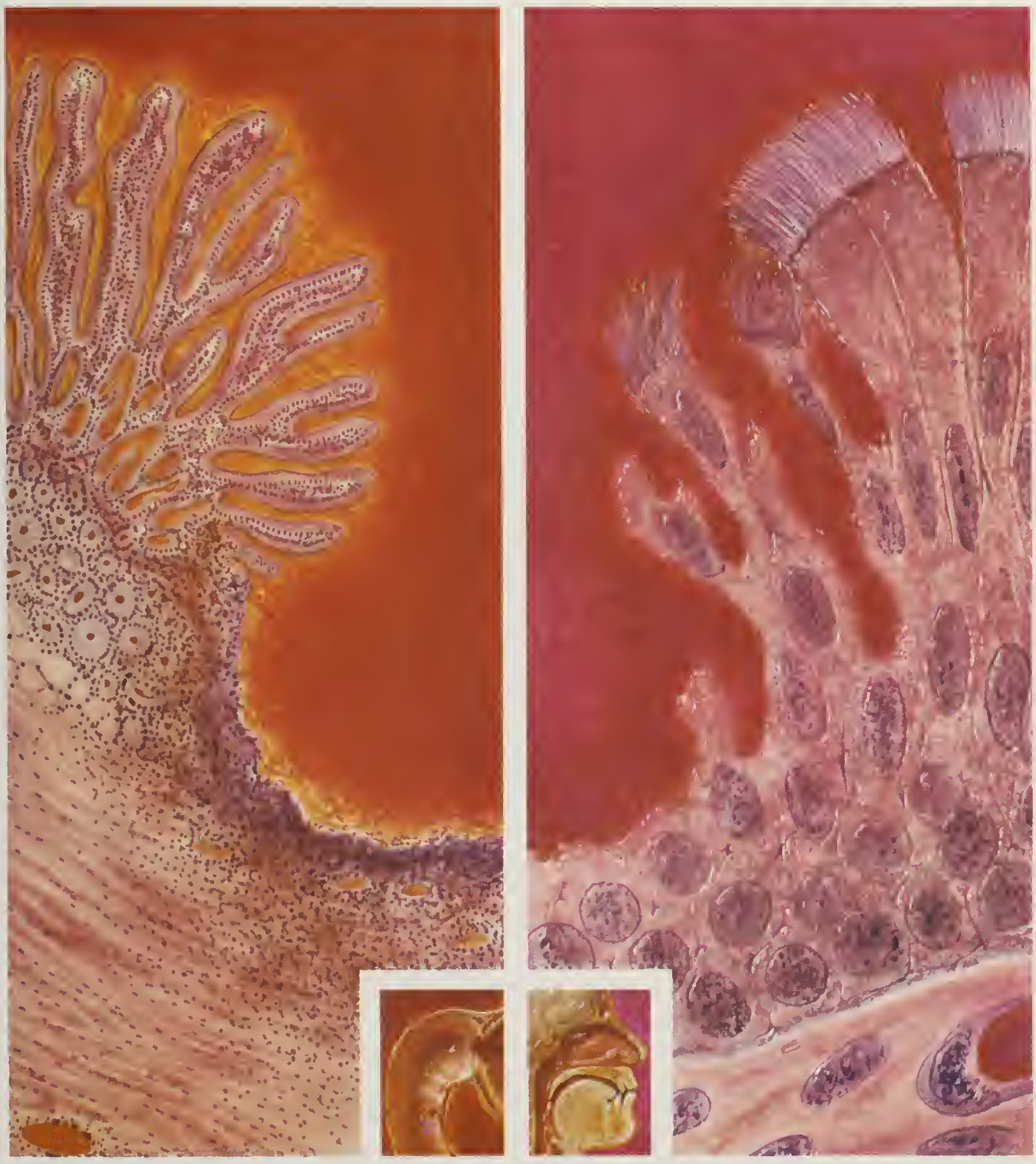
MSD MERCK SHARP & DOHME Division of Merck & Co., INC., West Point, Pa.

where today's theory is tomorrow's therapy

spring 1966

DORSEY Season

A journal within a journal published quarterly in the interests of better medicine by Dorsey Laboratories, a division of The Wander Company, Lincoln, Nebraska. Address communications to Raymond C. Pogge, M.D., Director of Medicine.



Duodenal mucosa with ulcer crater—
Approx. 80× Magnification.

Loosening epithelial cells of nasal mucosa during early stage of cold—Approx. 1800× Magnification.

this issue: partners in misery

partners in misery: common cold and duodenal ulcer*

a century or two ago our forefathers believed that the common cold was caused by an excess of evil humors. Today we regard these baleful humors as a result of the cold rather than its cause. Only in the last ten years have some of the offending viruses been cultivated, and we now know many others can be transmitted to human volunteers although they cannot yet be grown in the laboratory. Various body defenses react to infection by a virus, and in the respiratory tract the lung is protected by the phagocytic properties of the pulmonary alveolar macrophage.[1]

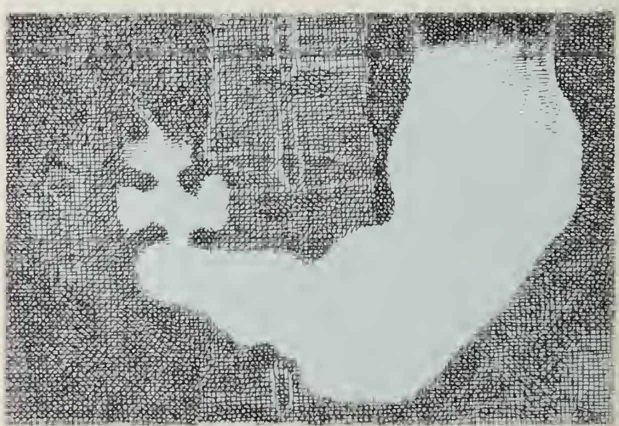
Because of the brief history and large proportion of unidentified viruses, effective prophylactic vaccines have not yet appeared. A universal antiviral agent seems even more remote. Meanwhile, these viruses continue to produce epidemics of upper respiratory infection at seasonal intervals, particularly in spring, fall and winter, during which they propagate and distribute progeny indiscriminately. As a result, they are responsible for significant work loss. Since the immunity afforded is temporary, recurrent infections are common.

This recurrent morbidity in spring and fall is shared by duodenal ulcer, itself a cause of significant loss in wages and medical expense. Thirty years ago Emery and Monroe reported 1,279 recurrences of peptic ulcer of which 13 per cent could be attributed to upper respiratory infection, thus confirming a long-held clinical impression.[2] While the inflammation, congestion and secretion of the mucosa of the nasopharynx in the common cold, and the hyperemia and hypersecretion of the gastric mucosa during acute exacerbation of a duodenal ulcer may not be directly linked, it is probable that the miseries of the infection are reflected in the pain of the ulcer. The following case history illustrates this point.

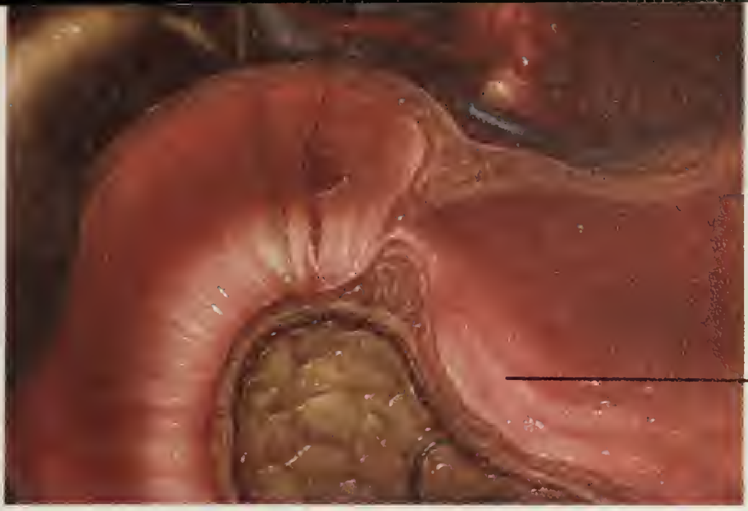
Case report A 48 year old white male executive, suffering from hematemesis and melena for 12 hours was admitted to hospital on April 8, 1965. He gave a history of duodenal ulcer proved by x-ray studies 23 years previously. In the intervening years he suffered from typical epigastric pain occurring two hours postprandially, usually for two or three weeks each spring and fall. A hospital admission two years earlier had followed hematemesis of moderate amount.

The present admission was preceded by a recurrence of pain during a period of unusual business pressure. In addition he caught a cold one week before his entry to hospital and his already irregular eating habits were made more so by loss of taste and appetite, blocked nose and general malaise. During the final 36 hours he used aspirin to relieve his cold, taking 2 or 3 tablets with a glass of water on 6 or 7 occasions. Before retiring he drank a glass of hot toddy.

He awakened about 1 a.m. and vomited dark red blood and recently ingested food mixed with whisky. Melena followed and he was transferred to hospital. On admission he was pale, cold and sweating. Apart from epigastric tenderness and black stool on the examining finger after rectal examination, his general physical examination was not remarkable. Temperature was normal, pulse was thin and thready with a rate of 114 beats per minute, and blood



The commonly found "clover-leaf" roentgenographic abnormality of chronic duodenal ulcer due to spastic contractions and scarring.



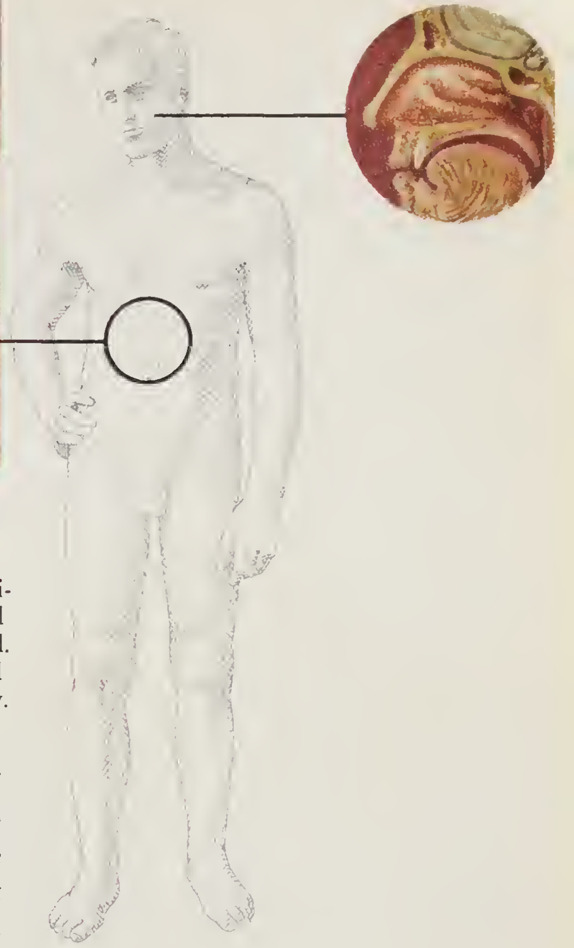
Typical site of duodenal ulcer showing anatomical relationship to gastroduodenal artery and common bile duct.

pressure measurement was 104/60mm. of mercury. Hemoglobin estimation was 8.6 grams per cent, but white blood count, chest x-ray and urinalysis were within normal limits. No further bleeding occurred. After blood transfusions and a suitable medical regime he was dismissed two weeks later and advised to return later for consideration of surgery.

the care of the ulcer patient suffering from a viral infection of the upper respiratory tract is additionally handicapped by the local and constitutional symptoms so produced. Indifference to food often makes it difficult to "feed a cold" even in a patient without an ulcer. In the ulcer patient this becomes more than a homily, for malaise and apathy towards irksome routine produce a lack of interest in adhering to an ulcer program and result in its eventual failure if these symptoms are not relieved. The absence of curative treatment for these viral infections has spawned many a strange therapeutic offspring and some of the more generally accepted remedies contain a special risk for the ulcer patient.

To the gastric physiologist, the shot heard around the world was not fired at Concord but was discharged through the stomach of Alexis St. Martin. The worthy voyageur had a more than modest thirst and on several occasions William Beaumont observed through the resulting fistula the changes of gastritis which followed an immoderate ingestion of alcohol.[3] It is now well known that alcohol stimulates the production of gastric juice and the patient with an ulcer, even in remission, should not drink alcohol without first taking food, milk or antacid. The use of various alcoholic remedies for the common cold is to be strongly discouraged in this type of patient. Factors already present can produce an acute exacerbation of ulcer symptoms without the added stimulus of alcohol.

Headache and facial pain, sore throat and generalized aching are subjective discomforts of viral infections of the upper respiratory tract or their complications. Relief from them is usually sought in the family medicine cabinet, and of all the medications habitually stored there, salicylates are the most frequently used. Oral ingestion of salicylates has produced



I can taste, Doctor!

On Sippy diet or unrestricted regimen, food tastes better to the patient with a cold when you prescribe the oral decongestant

Triaminic® *tablets*

Each timed-release tablet contains:

Phenylpropanolamine hydrochloride	50 m
Pheniramine maleate	25 m
Pyrilamine maleate	25 m

One tablet on arising, in midafternoon and a bedtime assures round-the-clock relief. Yo may occasionally encounter these side effect drowsiness, blurred vision, cardiac palpitation flushing, dizziness, nervousness or gastrointe tinal upsets. Precautions: the possibility c drowsiness should be considered by patient engaged in mechanical operations requirin alertness. Use with caution in patients with h pertension, heart disease, diabetes, or thyroto icosis.

(Advertisemen

substernal pyrosis and sometimes epigastric pain in susceptible individuals. Bleeding from erosions of the gastric mucosa has followed their use and has been severe ough in some instances to cause hematemesis and elena.[4] It has been suggested that interference th the protective mucous layer of the stomach ows this to happen. There is no evidence that persecretion occurs, but the taking of aspirin has en followed by exacerbation of ulcer symptoms d occasionally by gastrointestinal bleeding.[5] The cer patient with a cold should take salicylates with antacid, or preferably other means of symptoatic relief should be found.

iffeine has two actions on gastric secretion. One rectly stimulates production of acid and the other otentiates the out-pouring of gastric juice as a sponse to other stimuli.[6] In high doses to animals, has produced erosive gastritis and peptic ulcera- ın. Caffeine-containing beverages are discouraged r the ulcer subject and forbidden during an acute acerbation.[7] Many cold remedies contain caffeine.

) sufferers from allergic rhinitis springtime brings mptoms of nasal obstruction, loss of taste and iell and malaise similar to those caused by viral fection but due instead to allergens which at that ne of year are principally tree pollens. Relief from ese symptoms can be obtained, though not wisely, the use of steroid medication. Unfortunately, ronic sufferers from these allergies have used this proach with varying degrees of success. Steroid ›rmones increase gastric secretion and delay the ıaling of experimental ulcers.[8,9] Clinically their ministration has been associated with reactivation healed duodenal ulcers, and with bleeding and rforation which were not always preceded by pical ulcer distress. Because of these harmful ects, their use in the ulcer patient is best avoided r other than serious medical problems and then ıly with adequate antacid coverage.

ımming up

It is immaterial by which pathways e malaise and lassitude, depression and irritability tivate an ulcer, but it is the physician's responsility to ensure that the medications he selects to lieve the symptoms of a cold do not further aggrate the ulcer.

references

1. Divertie, M. B. and Brown, A. L., Jr.: The Pulmonary Alveolar Macrophage. Med. Clin. N. Amer. 48:1049-1054, July, 1964. 2. Emery, E. S., Jr. and Monroe, R. T.: Peptic Ulcer: Nature and Treatment Based on a Study of 1,435 Cases. Arch. Int. Med. 55:271, 1935. 3. Osler, W.: Experiments and Observations on the Gastric Juice and the Physiology of Digestion by William Beaumont, M. D. XIII Internat. Physiol. Congress. Boston, Massachusetts. pp. 280, 1929. 4. Leonards, J. R.: Aspirin and Blood Loss From the Gastrointestinal Tract. Fed. Proc. 21:452, 1962. 5. Kossover, M. F. and Kaplan, M. H.: The Role of Salicylates in Massive Gastrointestinal Hemorrhage. Am. J. Gastroenterology. 35:445-455, 1961. 6. Roth, J. A. and Ivy, A. C.: Synergistic Effect of Caffeine on Histaminic Response. Am. J. Physiol. 142:107, 1944. 7. Musick, V. A., Avey, A. T., Hopps, H. C. and Hellbaum, A. A.: Gastric Secretion in Duodenal Ulcer in Remission; Response to the Caffeine Test Meal. Gastroenterology. 7:332, 1946. 8. Kahn, D. S., Phillips, M. J. and Skoryna, S. C.: Healed Experimental Gastric Ulcer in the Rat; Re-Ulceration Resulting from Cortisone Administration. Amer. J. Path. 38:177-187, 1961. 9. Chaikof, L., Janke, W., Pesaros, P. C., Ponka, J. L. and Bush B. E.: Effects of Prednisone and ACTH on Gastric Secretion. Arch. Surg. 83:32-39, 1961.

*Author's name on request.

like magic!

for seasonal colds
and nasal allergies
Triaminic® *syrup*

Each teaspoonful (5 ml.) contains:
Phenylpropanolamine hydrochloride .... 12.5 mg.
Pheniramine maleate .... 6.25 mg.
Pyrilamine maleate .... 6.25 mg.

For nasal congestion regardless of cause, you can bring quick, lasting relief. Magic? Perhaps so to your little patients. To you, it's sound therapy. You may occasionally encounter these side effects: drowsiness, blurred vision, cardiac palpitations, flushing, dizziness, nervousness or gastrointestinal upsets. Precautions: the possibility of drowsiness should be considered by patients engaged in mechanical operations requiring alertness. Use with caution in patients with hypertension, heart disease, diabetes, or thyrotoxicosis.

Over 185 million doses prescribed

VOLUME 35 • JUNE 1966

EDITOR
Wallace M. Yater, M.D.

MANAGING EDITOR
George W. Cooley

ASSISTANT EDITOR
A. Louise Eckburg

EDITORIAL BOARD
Brion Blades, M.D.
Frederic G. Burke, M.D.
I. Phillips Frohman, M.D.
Naomi M. Kanof, M.D.
Zigmond M. Lebensohn, M.D.
Thomas M. Peery, M.D.
Herbert P. Ramsey, M.D.
George E. Schreiner, M.D.
Donald Stubbs, M.D.

CONSULTING EDITORS
Brig. Gen. Joe M. Blumberg, MC, USA, Director, Armed Forces Institute of Pathology
Irving B. Brick, M.D., Professor of Medicine, Georgetown University School of Medicine
W. Montague Cobb, M.D., Professor of Anatomy, Howard University College of Medicine
Vernon Knight, M.D., Clinical Director, National Institute of Allergy and Infectious Diseases
Walter Kurland, M.D., Chief, Outpatient Service, Veterans Administration Hospital
Colonel Loren F. Parmley, MC, USA, Chief, Department of Medicine, Walter Reed General Hospital
Alvin E. Parrish, M.D., Associate Professor of Medicine. George Washington University School of Medicine
Captain Rufus J. Pearson, Jr., MC, USN, Director of Professional Services, U.S. Naval Hospital

•

THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

OFFICERS

Robert J. Coffey, M.D., President*
Henry D. Ecker, M.D., President-elect*
Lawrence A. Rapee, M.D., First Vice President*
Claudine M. Goy, M.D., Second Vice President*
Mr. George W. Cooley, Secretary-Treasurer*

EXECUTIVE BOARD

J. Spencer Dryden, M.D., Chairman (1966)
Karl C. Corley, M.D. (1967)
Edward W. Nicklas, M.D. (1968)
Paul R. Wilner, M.D. (1969)

DELEGATES TO AMA
Raymond T. Holden, M.D.*
C. Willard Camalier, Jr., M.D.*

LEGAL COUNSEL
Mr. Warren E. Magee

---

* Ex officio member of the Executive Board

MEDICAL ANNALS
of the
DISTRICT OF COLUMBIA

2007 Eye Street, N.W. Washington, D.C. 20006

The **MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA** is published monthly by the Medical Society of the District of Columbia for the promulgation of information of scientific, general medical and personal interest. All articles and correspondence should be sent to DR. WALLACE M. YATER, EDITOR, MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA, 2007 Eye Street, N.W., Washington, D. C. 20006.

EXCLUSIVE PUBLICATION: Articles are accepted for publication on condition that they are contributed solely to this journal.

MANUSCRIPTS: Manuscripts must be typewritten, double-spaced, and the original copy submitted.

ILLUSTRATIONS: Photographs and drawings for illustrations must be carefully marked and show clearly what is intended. MEDICAL ANNALS will bear the cost of engravings for 2 illustrations accompanying manuscripts submitted for publication. The cost of more than 2 engravings must be borne by the author.

REFERENCES: References should include the name of author (last name and initials), exact title of article, name of periodical, with volume, page (day of month in weekly), and year. References should be numbered consecutively in the order in which they appear in the text.

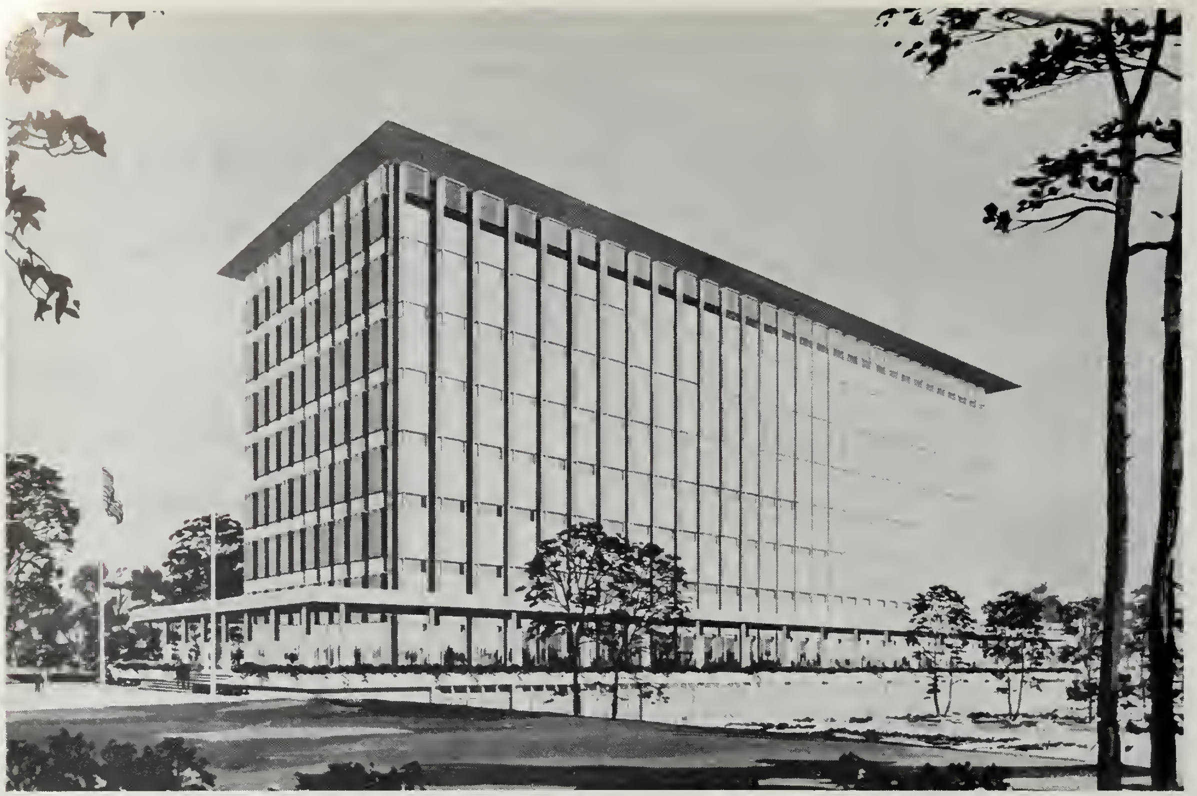
COPYRIGHT: Matter appearing in the ANNALS is covered by copyright but, as a rule, no objection will be made to its reproduction in reputable medical journals, if proper credit is given. However, the reproduction for commercial purposes of articles appearing in the MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA must have the approval of the Editor.

REPRINTS: Reprints may be obtained at cost.

ADVERTISING: Pharmaceutical advertising must be approved by the State Medical Journal Advertising Bureau, Inc. Other advertising copy may be accepted subject to the approval of the Editor. All copy or plates must reach the ANNALS office by the first of the month preceding publication. Display and classified advertising rates will be furnished on request.

SUBSCRIPTIONS: Subscription is included in the annual dues of members. To non-members the annual subscription price is: domestic, $5.00; Canadian, $5.50; foreign, $6.00, including postage; single copies, 50 cents.

Checks, etc. should be made payable to the Medical Society of the District of Columbia.



The Professional Building of Prince George's Center

is now leasing . . . An unusual opportunity to establish professional offices in the next important office building to be erected in the satellite city project described by the Maryland-National Park and Planning Commission as *"a planned residential, commercial, employment, and social complex which, as yet, has no equal in the Baltimore-Washington area."*

THE PROFESSIONAL BUILDING is designed by Edward Durell Stone, the master planner and architect for all of PRINCE GEORGE'S CENTER. It will be a twin of Mr. Stone's award-winning FEDERAL BUILDING, adjacent to the Prince George's Plaza Shopping Center on East-West Highway. THE PROFESSIONAL BUILDING and THE FEDERAL BUILDING will be separated by a Mall, an outdoor ice skating rink, and a 1,250-seat cinema.

THE PROFESSIONAL BUILDING of PRINCE GEORGE'S CENTER was designed with the unique requirements of the professional man in mind. A few of these features include:

- Enclosed auto arrival entrances and exits with abundant indoor and outdoor parking for patients or clients as well as staff.
- A private Health Club with squash, handball, swimming, sauna and lounge.
- Four high-speed elevators and a freight lift.
- A special corridor design which permits maximum use and flexibility in suite planning.
- Served by public transportation and situated on main arterial highways.

For information, call or write: FEDERAL BUILDING
Prince George's Center, Prince George's Plaza, Md.
phone: 779-4800. Ask for Mr. Coll

Thanks

to Dexamyl®

brand of
dextroamphetamine
sulfate and amobarbital

she can say "No thank you"

to the crêpes suzette.

'Dexamyl' does more than most anorectics. Because it curbs appetite *and* lifts mood, 'Dexamyl' can encourage the discouraged dieter to stay on her diet.

The mood lift with 'Dexamyl' can make the difference between the success or failure of her diet plan.

Formulas: Each 'Dexamyl' Spansule® Capsule (brand of sustained release capsule) No. 1 contains 10 mg. of Dexedrine® (brand of dextroamphetamine sulfate) and 1 gr. of amobarbital, derivative of barbituric acid [Warning, may be habit forming]. Each 'Dexamyl' *Spansule* capsule No. 2 contains 15 mg. of Dexedrine (brand of dextroamphetamine sulfate) and 1½ gr. of amobarbital [Warning, may be habit forming].

Principal cautions and side effects: Use with caution in patients hypersensitive to sympathomimetics or barbiturates and in coronary or cardiovascular disease or severe hypertension. Insomnia, excitability and increased motor activity are infrequent and ordinarily mild.

Before prescribing, see SK&F product Prescribing Information.

Smith Kline & French Laboratories

must penicillin
be a bitter pill
to swallow?

Not if it is V-Cillin K.

V-Cillin K now has a unique glossy coating that banishes bitter penicillin taste and makes it easier to swallow. Within six seconds (just long enough for the tablet to get past the taste buds), the coating dissolves and the penicillin is ready for immediate absorption into the bloodstream. The patient still gets all the special benefits of V-Cillin K, including consistent dependability . . . even in the presence of food.

Indications: V-Cillin K is an antibiotic useful in the treatment of infections caused by streptococci, pneumococci, and sensitive strains of staphylococci.

Contraindications and Precautions: Although sensitivity reactions are much less common after oral than after parenteral administration, V-Cillin K should not be administered to patients with a history of allergy to penicillin. As with any antibiotic, observation for overgrowth of nonsusceptible organisms during treatment is important.

Usual Dosage Range: 125 mg. (200,000 units) three times a day to 250 mg. every four hours.

Supplied: Tablets V-Cillin K, 125 or 250 mg.; also, V-Cillin K, Pediatric, 125 mg. per 5-cc. teaspoonful, in 40, 80, and 150-cc.-size packages.

V-Cillin K® **Six-Second Barrier to Bitterness**

Potassium Phenoxymethyl Penicillin

Additional information available upon request. Eli Lilly and Company, Indianapolis, Indiana.

600411

Lilly

MEDICAL ANNALS
of the District of Columbia

June 1966 VOLUME XXXV • NUMBER 6

National Naval Medical Center Number

This is the fifth of a fourth series of special numbers of the Medical Annals, the scientific material for which is supplied by medical institutions and scientific organizations in the Washington Metropolitan Area. For the National Naval Medical Center Number the Editorial Board is indebted to Captain Rufus J. Pearson, Jr., MC, USN, Consulting Editor of the Medical Annals, who secured the papers which appear in this issue. The opinions or assertions contained therein are the private ones of the writers and are not to be construed as official nor as reflecting the views of the Bureau of Medicine and Surgery of the Navy Department or the Naval Service at Large.

Live Measles Vaccine: Effect of Age and Preservative upon Seroconversion[*]

CAPTAIN A. M. MARGILETH, MC, USN, F.A.A.P.[†], LT. COMMANDER G. W. MELLA, MC, USN, F.A.A.P.[‡], AND F. DI MOIA, M.D., PH.D.[§]

The efficacy of live measles vaccine (LMV) in the protection of children over 1 year of age against rubeola is well documented.[1, 2, 3] Over 10 million recipients have been inoculated, and very few significant complications have ensued. Two live, attenuated, highly immunogenic measles virus vaccines are now available; both are equally effective for the prevention of measles.[4] A problem exists still of the best method of immunizing the infant under 1 year of age. Recent papers[5, 6] have shown that killed measles vaccine is effective in children under the age of 6 months and that complete protection is afforded after 1 dose of LMV at the age of 1 year following a course of 2 or 3 doses of killed vaccine during early infancy.

The present study was undertaken to compare the seroconversion rates and incidence of clinical reactions to live, attenuated measles virus vaccine (Rubeovax[||]) in children of 2 age groups, and specifically, to test the efficacy of vaccine reconstituted with diluent containing preservative and to document the utility of a multiple dose preparation of the vaccine. The age groups selected were 9–12 months of age and over 1 year of age.

Methods and Materials

The study was carried out in the immunization and pediatric well-child clinics of the U.S. Naval Hospital, Bethesda, Maryland, for the 8 months, February through September 1965. Children were selected for administration of the attenuated measles virus vaccine on the bases of a history negative for rubeola and of no contraindication medically. Children with acute illness, chronic infections, tuberculosis, leukemia, and those who were receiving steroids, antimetabolites or other live vaccines were not inoculated.

---

[*] Presented at the Second Annual Tri-Service Pediatric Military Seminar, March 2–4, 1966, at Walter Reed Army Medical Center in Washington, D. C.

[†] Chief of the Pediatric Service, United States Naval Hospital, National Naval Medical Center, Bethesda, Md. 20014.

[‡] Chief of the Pediatric Outpatient Department, United States Naval Hospital, National Naval Medical Center.

[§] Medical Research Laboratory, Merck Sharp & Dohme, West Point, Pa. 19486.

[||] Rubeovax, a product of Merck Sharp & Dohme, made available through the courtesy of Dr. Di Moia.

The multiple dose vial (5 doses) of the live, attenuated measles virus vaccine was reconstituted with either 3.5 c.c. of sterile diluent or sterile diluent containing thimerosal (1:10,000 dilution) in accordance with a double-blind, randomized schedule. Each vial of the reconstituted vaccine was to be used for 4 patients: 2 children in the 9- to 12-month age range and 2 children in the older age group. The fifth dose was available for a patient of either age group, depending on clinic attendance. All children received 0.5 c.c. (2,000 $TCID_{50}$) of the vaccine subcutaneously in the deltoid area. A blood specimen was obtained before immunization and at 4 weeks after immunization for serologic tests. Measles complement fixation titers were determined routinely; if the complement fixation test results were unsatisfactory, measles neutralization tests were performed to clarify the status of immunity.

Parents were advised of the possible occurrence of fever or rash, or both, and were instructed to treat any temperature of 101°F (38°C) or higher with liquids and antipyretic medication. They were encouraged to return to the clinic or to call at any time for a medical evaluation of the child's condition. Standard report forms were provided to the parents for recording the reactions, if any, during the 21-day postimmunization observation period. They were instructed to record the rectal temperature at least twice daily and every 4 hours if fever was present. The occurrence and the duration of rash were both recorded, as were also any untoward additional reactions. Gamma globulin was not given to any child.

Results

Fifty-three per cent of the childrn were in the over 12-month age-group; however, incidence of reactions was nearly the same in the 2 age-groups (table 1). No immediate local or systemic reactions occurred. In both groups about 70 per cent of the nonimmune patients had a reaction, whereas 14 per cent of the pre-immune individuals 9 to 12 months old and 22 per cent of those over 12 months of age had reactions, viz., rash or fever or both, with very little disability or malaise.

TABLE 1: Incidence of Reactions Related to Age and Immune Status Following Live Measles Vaccine in 224 Patients

AGE GROUP	TOTAL		REACTION		NO REACTION	
	No.	Per cent	No.	Per cent	No.	Per cent
9 to 12 mos.						
Nonimmune	85	38	59	70	26	30
Preimmune	21	9	3	14	18	86
Over 12 mos.						
Nonimmune	100	45	69	69	31	31
Preimmune	18	8	4	22	14	78
TOTAL	224	100	135	60	89	40

Rash. A mild morbilliform rash occurred in 25 per cent of the entire group, in 29 per cent of the nonimmune children in both age-groups, and 1 of 21 of the pre-immune 9- to 12-month group (table 2). A rash occurred in 22 to 27 per cent of the younger group; incidence was higher in those achieving a 4-fold, or greater, antibody titer. A similar situation was found in the older children (table 3). The rash occurred between the sixth and thirteenth day postinoculation in 94 per cent (table 4) and lasted for 24 to 71 hours in 75 per cent of those affected (table 5).

TABLE 2: Rash and Fever Related to Age and Immune Status Following Vaccination with Live Measles Vaccine

AGE GROUP	TOTAL	RASH		FEVER	
		No.	Per cent	No.	Per cent
9 to 12 mos.					
Nonimmune	85	25	29	56	66
Preimmune	21	1	5	2	10
Over 12 mos.					
Nonimmune	100	29	29	68	68
Preimmune	18	0	0	4	22
TOTAL	224	55	25	130	58

TABLE 3: Rash and Fever Related to Age and Serological Response after Administration of Live Measles Vaccine

AGE GROUPS: Antibody Rise	NO. CASES	RASH		FEVER	
		No.	Per cent	No.	Per cent
9 to 12 mos.	106				
< 4-fold	50	11	22	21	42
≧ 4-fold	56	15	27	36	64
Over 12 mos.	118				
< 4-fold	25	4	16	8	32
≧ 4-fold	93	25	27	65	70
TOTAL	224	55	25	130	58

TABLE 4: Intervals by Days of Onset of Fever and Rash after Administration of Live Measles Vaccine in 224 Children*

DAY OF OCCURRENCE	FEVER BY AGE GROUP				RASH	
	9 to 12 months		Over 12 months			
	No.	Per cent	No.	Per cent	No.	Per cent
6 to 7	12	21	16	24	11	20
8 to 9	20	36	28	41	15	27
10 to 11	16	29	20	29	15	27
12 to 13	8	14	3	4	11	20
Over 13	0	—	1	2	3	6
TOTAL	56		68		55	

* Preimmune group (total 6) not included.

TABLE 5: Duration of Rash and Fever Following Administration of Live Measles Vaccine*

DURATION Hours	FEVER BY AGE GROUP				RASH	
	9 to 12 months		Over 12 months			
	No.	Per cent	No.	Per cent	No.	Per cent
Under 24	20	36	13	19	7	13
24 to 47	14	25	14	20	13	24
48 to 71	20	36	29	43	21	38
Over 72	2	3	12	18	14	25
TOTAL	56	–	68	–	55	–

* Preimmune group (total 6) not included.

Fever. Fever, reported in 58 per cent of the 224 children (table 2), was about the same frequency in both age-groups. However, in only 23 per cent of the younger age-group was the fever over 103°F (39°C) (table 6). In both age-groups fever was more common in those children achieving a 4-fold or greater antibody titer (table 3). Fever occurred between the sixth and eleventh day after inoculation in 85 per cent of both age-groups (table 4) and persisted for 24 to 71 hours in over 80 per cent of each group (table 5).

TABLE 6: Degree of Fever Related to Age and Immune Status Following Live Measles Vaccine in 224 Children

AGE GROUP	FEVER No. Cases	DEGREE OF FEVER			
		100–103°F		Over 103°F	
		No.	Per cent	No.	Per cent
9 to 12 mos.					
Nonimmune	56	43	77	13	23
Preimmune	2	2	100	—	—
Over 12 mos.					
Nonimmune	68	37	54	31	46
Preimmune	4	4	100	—	—
TOTAL	130	86	65	44	35

Additional reactions. These were infrequent. Otitis media occurred in 4 children, bronchitis and nasopharyngitis (viral) in 6, and a simple febrile convulsion lasting a few minutes in 1. An 8-month follow-up has shown no sequelae in any of these patients.

Serological response. Antibody titers (4-fold or greater) were excellent (94 to 100 per cent) in nonimmune children of both age-groups who were inoculated with LMV reconstituted with sterile diluent. In those receiving the vaccine which was reconstituted with diluent containing thimerosal only 60 per cent in the 9- to 12-month age-group showed a 4-fold or greater rise in titer; only 75 per cent achieved a similar rise in the older group (table 7). Seventeen out of 21 infants (9 to 12 months old) who were pre-immune showed a less than 4-fold rise, whereas 4 of 21 infants developed a 4-fold or greater titer rise (table 8).

TABLE 7: Seroconversion (over 4-fold) Following LMV Related to Age and Type of Diluent in Nonimmune Patients

AGE GROUP	DILUENT ALONE		DILUENT PLUS THIMEROSAL	
	No.	Per cent	No.	Per cent
9 to 12 mos.				
Nonimmune	42/45	94	24/40	60
Over 12 mos.				
Nonimmune	47/47	100	38/51	75

TABLE 8: Seroconversion Following LMV Related to Patient Age and Immunity Status

AGE: IMMUNITY	TOTAL CASES	ANTIBODY RESPONSE			
		<4-fold		≧4-fold	
		No.	Per cent	No.	Per cent
9 to 12 mos.	106				
Nonimmune	85	32	38	53	62
Preimmune	21	17	81	4	19
Over 12 mos.	118				
Nonimmune	100	20	20	80	80
Preimmune	18	11	61	7	39

A significant number, 7 of 18 (39 per cent) of children over 12 months old had a 4-fold or greater rise in antibody in spite of a pre-immune status.

Discussion

An increased reaction rate was observed in this study in comparison with a report in 1965 in which the same live measles vaccine was used in a smaller dose.[7] Two factors account for this difference: (1) Standard report forms were used by the parents to record reactions in the present study, (2) serological studies were not performed in the former study, which resulted in some dilution and lowering of the true reaction incidence by pre-immune patients who had nonspecific fever and rash from other causes (tables 1, 2 and 3). Parents were told that fever and rash would be expected and that hopefully some reaction would take place to show the parents that a good "take" had occurred. During this study no parent requested gamma globulin after receiving this explanation. However, in routine practice, modified measles gamma globulin is given for the following indications: (1) past history of febrile seizures, (2) presence of a chronic debilitating disease, including tuberculosis and severe mental or motor retardation, and (3) known exposure to rubeola within the previous 3 days. In children exposed to measles it has been our experience[7] and that of others[8] that concomitant use of modified measles gamma globulin and LMV inoculation will protect them from natural virus infection and will actively immunize at the same time, if given within 3 to 4 days after exposure.

We have continued the policy of not using modified gamma globulin concomitantly with LMV except as mentioned. As discussed in a previous study, for the reasons of cost, waste, multiple infections, question of a "take" or a "not-take," therapeutic misadventure,[7] and the availability of further attenuated LMV vaccines, we believe that modified gamma globulin should not be used.

Live measles vaccine continues to be a very safe and apparently highly purified preparation. Several children with known allergy to eggs have been inoculated in our clinic during the past 3 years without experiencing an untoward reaction.[7] This vaccine has been administered to many of our patients with chronic pulmonary and cardiac disease.

Some of the more interesting findings in this study were the number of older children who were pre-immune and who had a history negative for rubeola. Four out of 18 (22 per cent) had a febrile reaction (tables 1 and 2). Apparently a few of these children had had measles. Eleven of the 18 (61 per cent) had less than a 4-fold rise in antibody titer (table 8). Three children who were pre-immune and had no rise in titer had a fever or rash, or both, within 5 to 7 days after inoculation. This has been reported by Schwarz[3] in his control group.

In the younger age-group 3 of 21 (14 per cent) were pre-immune and had a reaction—fever in 2 and rash in 1 (table 2). The pre-immune status was probably due to transferred maternal antibody, especially in the 9- and 10-month-old infants. In the group with less than a 4-fold antibody rise, 11 (22 per cent) had a rash, and 21 (42 per cent) had a fever (table 3). Of the 21 infants less than 12 months of age who were pre-immune 17 (81 per cent) had less than a 4-fold rise in measles antibody titer by either neutralization or complement fixation tests. Some of these infants received LMV reconstituted with diluent which contained thimerosal.

Seroconversion rate data are summarized in table 7. In each of the 2 age-groups the children who received LMV reconstituted with sterile diluent alone showed a statistically significant higher conversion rate than those administered the diluent containing thimerosal ($P < 0.001$). Although the older children showed a higher conversion rate than those 12 months of age or younger, the difference was not statistically significant.

Analysis of the incidence of rash in the 2 age-groups related to type of diluent used and immune status showed no meaningful preparation differences. However, the nonimmune children showed a statistically significant higher incidence than the immune children ($P < 0.05$). A similar analysis of the incidence of fever showed no significant preparation (type of diluent) differences.

Substances in addition to thimerosal which can inactivate LMV within a short period of time are detergents, alcohol, ether, chloroform, and sunlight. Care must be taken to use the reconstituted vaccine within 8 hours because vaccine potency falls off rapidly thereafter. Additional precautions that must be taken to ensure good antibody response have been discussed heretofore.[7] If gamma globulin or a blood transfusion has been given in the preceding 6 weeks, vaccination should be deferred. The administration of other killed vaccines at the same time should not interfere with a good "take." However, at present, concomitant use of other live vaccines is not recommended, even though studies[9] have shown lack of interference.

Experience during the past 3 years in administering over 4,000 doses of LMV in our clinic has shown that measles vaccine is effective and harmless and produces minimal reactions. It provides solid immunity for 6 years at least. Recent studies[2] have shown that protection may extend for a lifetime, as evidenced by well-sustained antibody titers and durable immunity upon repeated exposure to measles. Apparently in immunized children there are some recall phenomena with antibody rise upon reëxposure and reinfection with the wild measles virus.

Summary

Children totaling 224 and consisting of 2 age-groups (9 to 12 months; over 12 months) were inoculated with live measles virus vaccine which was reconstituted with 2 diluents, 1 containing thimerosal. Each patient was carefully followed for any reaction to the vaccine, and pre- and postinoculation antibody titers were determined. Mild reactions occurred in 70 per cent of the nonimmune children in both age groups, fever in 67 per cent and rash in 29 per cent. Rash occurred between the sixth and thirteenth days and lasted 1 to 3 days. Fever was more common in those who achieved a 4-fold or greater rise in antibody titer, occurred between the sixth and eleventh day after inoculation, and lasted 1 to 3 days. Additional reactions were infrequent and mild. These were respiratory-tract infections and 1 simple febrile convulsion.

Serological response was excellent (100 per cent) in the older age group and in 94 per cent in the younger infants who received vaccine diluted with sterile diluent alone. However, in children in both age-groups who received vaccine reconstituted with diluent containing thimerosal, the antibody response was only 60 per cent in the younger age-group and 75 per cent in the older.

Live measles vaccine is a safe and effective virus vaccine which produces prolonged immunity (over 6 years) in 99 per cent of children inoculated after 12 months of age. In view of its proven efficacy during the past 6 years, 1 dose of measles vaccine should be given routinely to all children at 1 year of age in order to avoid the possible severe complications of rubeola, viz., encephalitis,[10] or death, or even both.

Acknowledgment is made to Mrs. K. Burnett for typing this manuscript, and to Miss Frances Atkinson, B.A., R.R.L. for technical editing.

References

1. Katz, S. L.: Immunization with live attenuated measles virus vaccines; five years' experience. Arch. Ges. Virusforsch., 1965, **16**, 222.
2. Krugman, S., Giles, J. P., Friedman, H., and Stone, S.: Studies on immunity to measles. J. Pediat., 1965, **66**, 471.
3. Schwarz, A. J. F., and Anderson, J. T.: Immunization with a further attenuated live measles vaccine. Arch. Ges. Virusforsch., 1965, **16**, 273.
4. Krugman, S.: Correspondence: Measles vaccine. New Eng. J. Med., 1965, **273**, 563.
5. Rauh, L. W., and Schmidt, R.: Measles immunization with killed virus vaccine. Amer. J. Dis. Child., 1965, **109**, 232.
6. Krugman, S.: Measles immunization; combined vaccinations. Arch. Ges. Virusforsch., 1965, **16**, 339.
7. Margileth, A. M., and Mella, G. W.: Live measles vaccine: a practical method for mass immunization. Clin. Pediat., 1965, **4**, 131.
8. Fulginiti, V.: Simultaneous measles exposure and immunization. Arch. Ges. Virusforsch., 1965, **16**, 300.
9. Meyer, H. M.: Field experience with combined live measles, smallpox, and yellow fever vaccines. Ibid., 1965, **16**, 365.
10. Phillips, C. A.: Inclusion bodies in measles encephalitis; an editorial. J.A.M.A., 1966, **195**, 167.

Evaluation for Pulmonary Embolectomy

LIEUTENANT R. L. PISCATELLI, MC, USN*

Pulmonary embolism as a cause of morbidity and mortality in hospitalized patients constitutes a major problem to all medical disciplines. With increasing awareness of the importance of this disease, antemortem diagnosis is becoming more frequent, and greater attention is being paid to prophylaxis for venous thromboembolism and early treatment for overt pulmonary embolism.

Of those patients who suffer from massive embolism, at least one-fifth survive long enough to allow both institution of an organized diagnostic effort and possible embolectomy.[1] This operative procedure has been receiving increasing attention, and a number of successful instances have been reported.

Three representative cases to illustrate a workable and expeditious preoperative routine that insures accuracy of diagnosis are described. These present objective data which can assist in making the decision regarding embolectomy.

Report of Cases

Case 1. B. K., a 38-year-old white woman, who had been under heparin therapy for 7 days for acute saphenous thrombophlebitis, suddenly collapsed. She was acutely short of breath and had oppressive chest discomfort. The blood pressure was 70/50 and the pulse 150. She was cyanotic and diaphoretic. There was a single muffled second heart sound in the pulmonic area, and a previously recorded pulmonic murmur was not appreciated. A ventricular diastolic gallop was present over the xyphoid, and the patient was moderately tender in the right upper quadrant of the abdomen.

An electrocardiogram showed a shift of the axis 30° rightward from previous tracings and nonspecific ST-T wave changes. Portable chest films showed relatively decreased vascularity of the right lung field. The patient was taken to the cardiopulmonary laboratory where a no. 6 NIH catheter was passed into the right side of the heart. Right ventricular pressure was 75/5–10 mm. Hg. Contrast material was injected into the right atrium and, on the image intensifier television monitor, occlusion of the right main pulmonary artery was demonstrated. Cineangiograms confirmed these findings. Simultaneous alveolar and arterial blood gases were measured. The arterial oxygen saturation was 86 per cent while the patient was receiving oxygen by nasal catheter. The arterial pCO_2 was 27 mm. Hg with a pH of 7.48. The end-expired pCO_2 was 7.2 mm. Hg. The 20 mm. arterial-end expired CO_2 gradient was consistent with a diagnosis of massive pulmonary embolism. The patient was then taken to the operating room where a successful pulmonary embolectomy and vena caval ligation were performed without the use of cardiopulmonary bypass.

Reëvaluation 1 year after operation disclosed no clinical evidence of pulmonary hypertension. Electrocardiogram, chest X-ray films, arterial and alveolar blood gases, and a lung scan with radio-labeled macroaggregated serum albumin were within normal limits.

Case 2. E. Y., a 45-year-old white man, was hospitalized because of fever, right-sided pleuritic chest pain, and shortness of breath. The patient was treated with heparin, but 2 weeks after admission he became suddenly faint and short of breath. His symptoms subsided with bed rest and oxygen administration, but over the next 12 hours he exhibited a ventricular diastolic gallop, distention of the neck veins, and return of dyspnea. Electrocardiograms were unchanged. The chest X-ray films showed an increase in the size of the main pulmonary artery. In the cardiopulmonary laboratory arterial pO_2 was 69 mm. Hg. Arterial pCO_2 was 22 mm. Hg, and end-expired pCO_2 was 15 mm. Hg. The arterial-alveolar pCO_2 gradient of greater than 25 per cent was consistent with the presence of pulmonary embolism. Right-heart catheterization showed the pulmonary artery pressure to be 63/22 with a mean of 36 mm. Hg. Cineangiograms showed a filling defect in the main pulmonary artery. The right and left lungs opacified poorly. A successful bilateral pulmonary embolectomy and vena caval ligation were performed. Two months postoperatively a lung scan was normal, as were blood and alveolar gases. There was no clinical evidence of pulmonary hypertension.

Case 3. R. A., a 51-year-old physician, had suffered a compound fracture of the left tibia and fibula 2 months prior to admission and was still in a cast when first seen. He had noted pleuritic chest pain for 2 days prior to admission and on admission to the hospital was short of breath. The heart rate was 120 per minute, but the patient was afebrile and there were no other findings.

---

* Resident in Medical Service, United States Naval Hospital, National Naval Medical Center, Bethesda, Md. 20014.

A roentgenogram of the chest showed atelectatic densities at both lung bases. An electrocardiogram was normal. The patient was treated with heparin. On the following day he was noted to be quite short of breath, diaphoretic, and cyanotic. The neck veins were distended.

On cardiac catheterization study, the right ventricular pressure was 30/0–5 mm. Hg. The catheter was positioned in the right atrium, and 30 c.c. of 90 per cent Hypaque® was injected. The pulmonary arteriogram showed normal main, right and left pulmonary arteries but non-filling of the right and left lower lobar arteries. Blood gas analysis showed pH 7.44, arterial pO_2 45 mm. Hg with 82 per cent saturation. Both alveolar and arterial pCO_2 were 37 mm. Hg.

A vena caval ligation was performed, the patient being maintained on intravenous heparin. Subsequently his clinical condition improved slowly, and 3 months after surgery there was no clinical evidence of pulmonary or cardiac insufficiency at moderate activity. A lung scan showed a persistent defect at the left lung base, and arterial blood gases were normal.

Discussion

As has been stressed often, the incidence of pulmonary embolism is high in hospitalized cardiac, obstetrical, and orthopedic patients. This is especially true in those patients who have or have had venous disease. The sudden occurrence of syncope, dyspnea, and cyanosis, associated with physical findings suggesting acute pulmonary hypertension, renders both absolute diagnosis and evaluation of the extent of embolism matters of utmost urgency. To subject a seriously ill patient to thoracotomy without the security of such information seems unwise. In addition, as much data as can be possibly obtained in a short time should be gained to choose that patient with embolism who requires embolectomy.

Pulmonary angiography has been performed on desperately ill patients without further deterioration of their conditions and is probably the most specific technique for the absolute identification of embolic disease.[2] Selective pulmonary cineangiograms appear to be safest, since a smaller amount of radiopaque material may be injected. In addition, right atrial injection is helpful in excluding the heart itself as the source of emboli. At least 1 patient is known to us in whom emboli arose from a large thrombus in the right ventricle.[3] Obviously, inferior vena caval ligation would not have benefited this patient. It is also important to look for filling defects in the pulmonary arteries. In the second patient presented, all areas of the pulmonary vasculature were seen to opacify; yet, on careful study of the cineangiograms there was a persistent filling defect with streaming around it in the main pulmonary artery. At operation the patient had massive pulmonary artery embolism. Definition of the location and extent of the involvement is also essential to the surgical team in developing their approach to the problem. Pressure measurements from the right side of the heart allow another parameter of functional evaluation, and the catheter may be left in place to monitor pressure should it be elected not to operate at that time.

In a patient suffering from massive embolism the alveolar and arterial blood gas studies often demonstrate hypoxemia, hypocapnia, and respiratory alkalosis. More important, they may disclose a significant arterial-alveolar carbon dioxide gradient indicating an area of unperfused but aerated lung tissue. In our laboratory, rather than absolute numbers a gradient greater than 25 per cent of the arterial pCO_2 is accepted as being compatible with massive occlusion. On the other hand, massive occlusion may be present with no gradient. It should also be noted that significant a-$APCO_2$ gradients have been observed in the postoperative hypoventilation syndrome and in some patients with severe pulmonary emphysema.[4]

In our experience (macro-aggregated) lung scan with albumin labeled with radioiodine lends less specificity to the diagnosis of acute massive embolism than does angiography. However, when angiographic study is not available, isotopic scanning may be a suitable substitute. We do think that lung-scanning is especially useful in follow-up evaluation of patients.

Case 1, B.K., demonstrates a patient in whom the clinical and laboratory evidence of massive pulmonary embolism was unequivocal, and who was near death. We think there is little question in this sort of patient that embolectomy is indicated.

The second patient (case 2), E.Y., initially responded to conservative treatment, that is, oxygen, bed rest, and anticoagulant therapy. But, subsequently, the clinical findings progressed and laboratory examination supported the presence of a marked physiologic aberration, although the patient's symptoms were only moderate. The laboratory studies indicated strongly a need for the surgical intervention which disclosed quite massive pulmonary embolism.

R.A. (case 3) was quite ill with diaphoresis, cyanosis, and dyspnea. His pulmonary angiograms showed definite occlusion of pulmonary vasculature and, although it is recognized that there is usually more substantial occlusion than may be apparent by contrast study, the right and left main pulmonary arteries were clear. The presence of hypoxemia in the presence of a normal a-ACO_2 gradient was thought to be more consistent with infarcted lung where unaerated lung tissue was lacking arterial supply. The decision was not to operate under these circumstances.

Since the number of reported successful pulmonary embolectomies is relatively few, the indications for surgical intervention are not clear and were held to be "the crux of the issue" in a recent review.[5] Sustained peripheral hypotension or failure to respond to oxygen, morphine, and intravenous heparin within 30 minutes is suggested as an indication to intervene by some authorities.[6]

Each case of pulmonary embolism at our institution is promptly surveyed for clinical evidence indicating right heart decompensation and/or low cardiac output. Progression or regression of symptoms and signs are duly noted while the patient is on medical management including intravenous heparin, pressor agents, oxygen, and narcotics when needed. In the meantime, the Cardiopulmonary Laboratory and the Thoracic and Cardiovascular Surgical Service are mobilized. Patients considered probable candidates for embolectomy undergo final laboratory examinations, which we feel are mandatory to assure accuracy of diagnosis, before entering into major surgery in the case of a severely ill patient. In addition, valuable data are accumulated which will assist in resolving more clearly the thorny problem as to which patients need operation.

References

1. Donaldson, G. A., Williams, C., Schnnel, J. G., and Shaw, R. S.: Reappraisal of application of Trendelenburg operation to massive fetal embolism; report of a successful pulmonary-artery thrombectomy using a cardiopulmonary bypass. New Eng. J. Med., 1963, **268,** 171.
2. Williams, J. R., Wilcox, C., Andrews, G. J., and Burns, R. R.: Angiography in pulmonary embolism. J.A.M.A., 1963, **184,** 473.
3. Moser, K.: Personal communication.
4. Robin, E. D.: Some aspects of physiologic disturbances associated with pulmonary embolism. Med. Clin. N. Amer., 1960, **44,** 1269.
5. Thomas, D. P.: Treatment of pulmonary embolic disease—a critical review of some aspects of current therapy. New Eng. J. Med., 1965, **273,** 885.
6. Hampson, F., Milne, A. C., and Small, W. P.: Surgical treatment of pulmonary embolism. Lancet, 1961, **2,** 402.

Clinical Research Center at Children's Hospital

A Clinical Research Center to the Research Foundation of Children's Hospital, which has been made possible by a grant from the National Institutes of Health, will provide a facility for the research activities of the staff, including members of the pediatric faculties of Georgetown and George Washington University Schools of Medicine.

The Center will be one of only 19 exclusively pediatric research facilities in the Nation and the third to be established in the South.

The entire operation of the 8-bed clinical research unit with its supporting laboratory facilities will be financed by a $2,021,859 Federal grant to be appropriated over a 7-year period. The amount will cover conversion of available space within the Hospital, equipment, staffing costs and patient care. There will be no charge to patients accepted for study.

Patients admitted to the Center will be those who fit into a research program being conducted by a member of the Hospital's medical or surgical staff. Thirty-three different projects have already been approved for 11 research departments at Children's. Cancer, neurological anomalies, burns, allergies, obesity, congenital heart disease, failure to thrive, virus infections, iron poisoning, and kidney failure are but a few of the problems and their treatment to be explored in depth by the team of investigators. Average stay of patients will run from 24 hours to several months or longer, depending on the patient and the condition under scrutiny.

Dr. Robert H. Parrott will serve as Principal Investigator of the Center in addition to his post as Director of Children's Hospital and its Research Foundation. Dr. Gordon B. Avery, Director of Neonatology at Children's and Chief of the Research Foundation's Embryology Section, will be Program Director, and Dr. John C. Houck, Director of the Biochemical Research Laboratory at Children's, has been appointed Chief of the Center's Core Laboratory. Members of the Advisory Committee for the Clinical Research Center will include Dr. Philip L. Calcagno and Dr. William A. Howard, who head the Departments of Pediatrics at Georgetown University and George Washington University, respectively.

It is anticipated that the Center will be in operation by the end of 1966.

The Use of the Dilutional Partial Thromboplastin Time in the Detection of Potential Hypercoagulable States

LT. COMMANDER ROSS B. MOQUIN, MC, USN[*], AND LT. COMMANDER RICHARD M. RYAN, MC, USN[†], with the technical assistance of LAWRENCE KLUMPP, HN/USNR[‡]

There is, normally, a constant balance of factors promoting coagulation with those preventing intravascular thrombosis. Until a few years ago emphasis in the field of coagulation had been placed on disorders characterized by deletion of coagulation factors. Interest has been aroused in conditions associated with excessive intravascular coagulation. Emphasis is currently being placed on thrombo-embolic conditions associated with increased soluble coagulation factors. The defect in hemostasis leading to the propensity for the blood to clot has been aptly coined the "hypercoagulable state." This is defined by Sise et al[1] to be that ". . . condition in which thrombi are prone to form abnormally and to the detriment of the organism upon provocations which normally would not lead to such thrombosis."

Although advances in its delineation have been made,[1-7] the ability to detect hypercoagulability in a clinical setting has not kept pace. Tests for individual factors may be cumbersome, and routine clinical tests such as the coagulation time are not reproducible or lack sufficient sensitivity.

We have recently used a minor modification of the partial thromboplastin time (PTT) to determine whether such a readily performed and reproducible test could be altered in conditions previously associated with hypercoagulability. The PTT is an in vitro test performed on plasma which detects abnormalities of all coagulation factors except VII and platelet factor 3.[8] It is especially useful in screening defects in the first stage of coagulation.

Based on the premise that detection of increased in vitro coagulability of the blood may be enhanced when diluted, as compared with normal plasma in similar dilution,[6-9] we embarked on the current study. Its purpose was to see if we could demonstrate a foreshortening of the PTT with the use of serially diluted plasma from patients who had conditions associated with increased in vivo capacity for the blood to clot. Ultimately, the problem was to see if the dilutional PTT could be used as a screen for detecting in vitro hypercoagulability. There was no attempt to delineate the disorder but merely an effort to see if the PTT could be altered by serial dilutions when compared with normal individuals.

Materials and Methods

The patients selected for the study were in 2 major categories. The first was 30 obstetrical patients who were studied while in active labor and at 24-hour intervals for up to 4 days postpartum. The second was 19 patients from other services who had malignant tumors.

We used the PTT with a cephalin reagent[§] activated with celite. In addition to standard determinations with 100 per cent plasma, the sample was serially diluted with saline in 10 per cent decrements such that activities through 10 per cent plasma in saline were obtained. A standard PTT was then performed on each of the diluted specimens.

Normal values were obtained from 25 apparently healthy male and female ward personnel. Six normal females, upon their first prenatal clinic visit, were also tested.

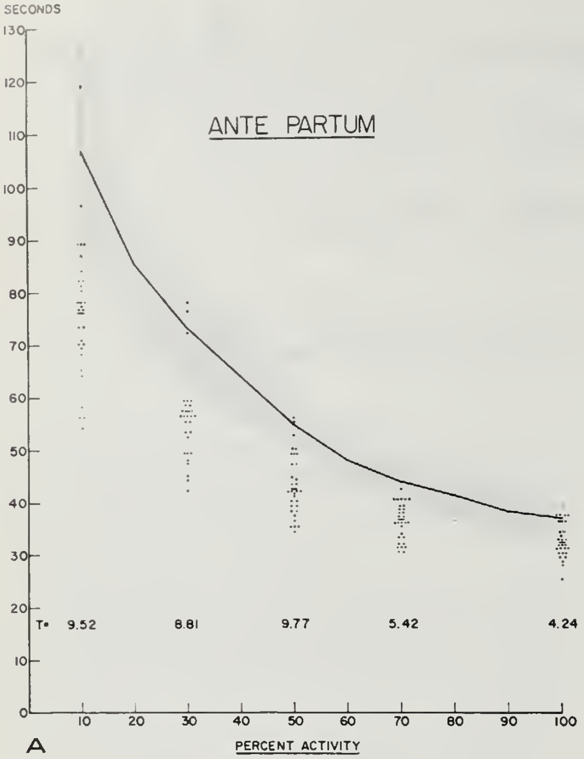
---

[*] Head of the Hematology Branch, Medical Service, United States Naval Hospital, National Naval Medical Center, Bethesda, Md. 20014; Clinical Assistant Professor in Medicine, Georgetown University School of Medicine.

[†] Resident in Obstetrical-Gynecological Service, United States Naval Hospital, National Naval Medical Center.

[‡] Staff Member, Hematology Branch, Medical Service, United States Naval Hospital, National Naval Medical Center.

[§] W 3906—Platelin® activated with celite, supplied through the courtesy of the Research Branch, General Diagnostics Division, Warner-Lambert Pharmaceutical Company, Morris Plains, N. J.



Results

Figure 1-A depicts the normal mean with its 2 standard deviations compared with the results from the 30 obstetrical patients in active labor. At their first prenatal visit the 6 normal women fell well within the normal range. There was considerable overlap of test samples with the normal range of 100 per cent plasma. However, upon dilution there was a greater spread from the 25 normal controls. There thus would appear to be 2 populations, i.e., the normal and the women in active labor.

Figure 1-B represents the results obtained in 28 of the original 30 patients. At 100 per cent there was no statistical significant difference while there continued to be a spread from normal upon dilution with saline.

Figure 1-C shows the results of tests performed on 22 of the original 30 patients between 24 and 48 hours postpartum. Though there is still a dispersion of the 2 populations, the degree and consistency is of less statistical significance than in prior determinations.

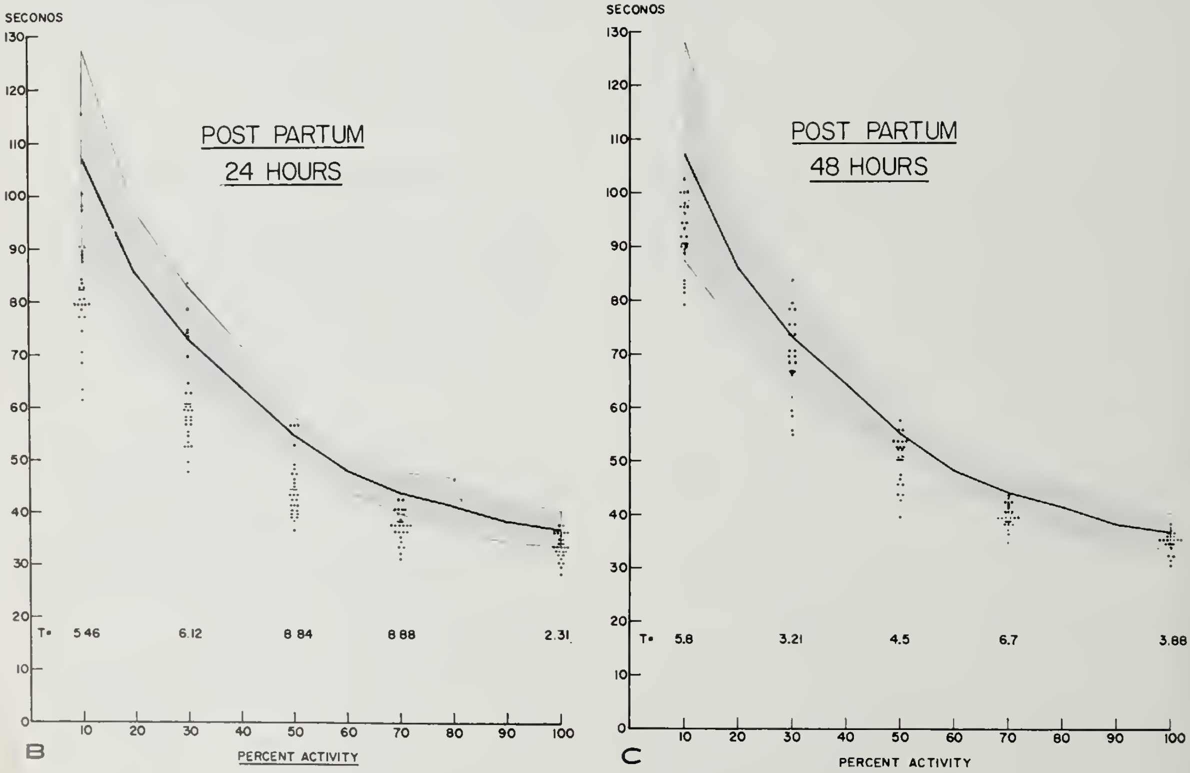


FIG. 1. Obstetrical patients in active labor. Abscissa represents dilutions of plasma to saline indicated by per cent activity. Ordinate represents partial thromboplastin time in seconds. Normal mean and 2 standard deviations are denoted by solid curve and shaded areas, respectively. Test samples are indicated by the individual dots. Mean of test samples is denoted by short bars. T value is given at lower portion of figure. A value above 2.67 indicates that there is only 1 chance in 100 that the 2 populations are the same.

Figure 2 is presented to show graphically the changes of the test at the 50 per cent dilution from antepartum. It will be noted that there is, following delivery, a tendency of the determination to approach the normal range.

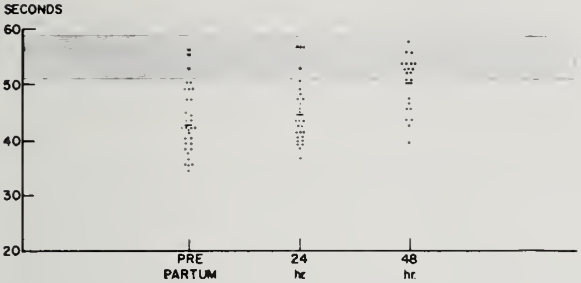


FIG. 2. Change of 50 per cent partial thromboplastin time (antepartum through 48 hours postpartum).

Determinations on 14 patients of the original 30 at 72 hours and 6 at 96 hours were also made. The results continued to show progressive similarity with the normal, but because the number of patients was too small as compared with the original, statistical significance is doubtful and no conclusions may be drawn.

Three of the original 30 patients were diagnosed as having preëclampsia. One is represented by the lowest point on the graph of figure 1-A while the other 2 are just below the mean of the test group. An additional patient with preëclampsia, not studied as a part of the original 30 patients, was found to have a shortened 50 per cent PTT of 38.5 and 40.5 seconds, 2 and 4 days postpartum, respectively. At delivery the placenta contained a larger than normal number of infarctions.

Table 1 presents a summary of the patients studied in the second major group. Of the 19 patients with documented malignant lesions 9 had foreshortened PTT's. Six of 8 patients with carcinoma of the lung had abnormal tests. The last category includes patients with carcinoma of the breast, lymphosarcoma, Hodgkin's disease, multiple myeloma, renal and bladder carcinoma, and malignant melanoma. Table 2 presents the data on the patients who had abnormal PTT's. In 8 of the 9 there was greater than 3 standard deviations from the normal mean in at least 2 of the

TABLE 1: Summary of Results of Partial Thromboplastin Times Performed on Patients Who Have Had Malignant Lesions

Diagnosis	Number	Short PTT
Bronchogenic carcinoma	6	4
Undifferentiated carcinoma, lung	1	1
Squamous-cell carcinoma, lung	1	1
Other	11	3
Total	19	9

TABLE 2: Correlation of Results of Patients in Table 1 Who Had Abnormal Partial Thromboplastin Times

Patient	Diagnosis	Therapy	100 per cent S.D.*	70 per cent S.D.	50 per cent S.D.	Remarks
C.W.	Malignant melanoma	Phenylalanine; mustard	3.24	5.64	8.70	
J.C.	Hodgkin's disease	None	2 × 3	4.83	8.46	
I.K.	Bronchogenic carcinoma	Radiotherapy	3.54	2 × 3	4.10	
C.S.	Bronchogenic carcinoma	Radiotherapy	4.69	4.3	4.16	Fever and dyspnea 3 days later. Died 5 days after test. Multiple pulmonary emboli; studies normal 3 weeks before
J.W.	Multiple myeloma	None	5.5	7.02	8.92	
D.S.	Bronchogenic carcinoma	None	4.57	5.41	9.76	Rapid progress
A.F.	Squamous-cell, lung	Radiotherapy	4.57	5.56	8.81	
C.M.	Undifferentiated carcinoma, lung	None	<2	2 × 3	4.63	
R.F.	Bronchogenic carcinoma	Radiotherapy	3.24	3.78	<2	Rapid progress

* Two standard deviations from the mean includes 95 per cent of the population.

dilutions. The greatest deviation from normal was at the 50 per cent dilution in 7 of 9 cases.

Of interest is that C.S., 3 weeks prior to the data presented here, had had a completely normal study. Three days after the test was repeated, he developed fever and tachypnea and 2 days later died as the result of multiple pulmonary emboli.

Figure 3 illustrates a single case of a 22-year-old Caucasian woman who had been taking an ovulatory inhibitor for the preceding 18 months. She was admitted to the hospital because of clinically evident superficial thrombophlebitis. Her last dose of ovarian suppressive agent was on the day prior to admission. She was treated without anticoagulants and the symptoms ceased. The initial determinations were greatly foreshortened. However, by the third hospital day the tests were within normal range. Upon subsequent determinations 100 per cent activity remained normal while 50 per cent plasma in saline dropped below normal upon the first day of the next menses.

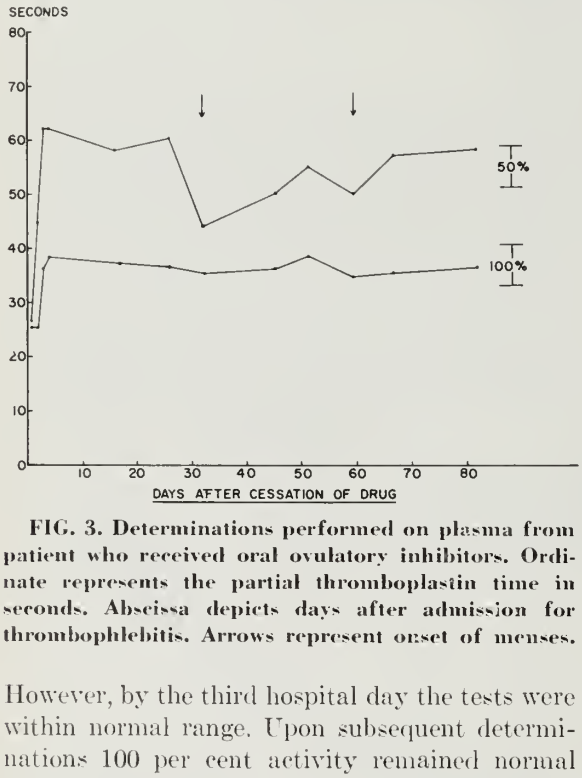


FIG. 3. Determinations performed on plasma from patient who received oral ovulatory inhibitors. Ordinate represents the partial thromboplastin time in seconds. Abscissa depicts days after admission for thrombophlebitis. Arrows represent onset of menses.

Discussion

The association of a hypercoagulable state with various physiologic, pathologic and pharmacologic conditions is becoming well recognized.[1-5] Much work has been done to define the increased incidence of thrombo-embolic phenomenon in these categories. Smith et al[10] reported that pulmonary embolism is now the most common lethal pulmonary disease in adults seen at necropsy in the general hospital population. It is the third most common nonlethal pulmonary lesion after pneumonia and emphysema. In 1960 it was the main cause of death in 15 per cent of the patients examined by necropsy and a major contributory cause in an additional 19 per cent.

The cephalin or PTT has been found to be variably altered in patients having thrombo-embolic disease[3] and in patients receiving oral ovulatory inhibitors.[11] Dogs known to have 150 to 300 per cent of individual factors have been found by us[12] and others[13] to have 100 per cent PTT's which are half the time of normal humans.

The purpose of the current study was to see if sensitivity to foreshortening of the PTT could be enhanced by dilution of plasma. Similar studies by Shapiro et al[9] on patients with myocardial infarction showed that the prothrombin time could be used as a gauge of increased activity of the extrinsic thromboplastin system. Spittell et al[6] used the thromboplastin generation test with plasma in dilution to demonstrate the hypercoagulability in patients who had thrombo-embolic disorders. Both studies would lend credence to the concept that dilution of plasma increases sensitivity to changes in activity of plasma factors when compared with the normal.

The advantage of using the PTT over the prothrombin time is that it measures the entire intrinsic system except platelet factors. The prothrombin time measures only the extrinsic system. The PTT would appear to include changes in circulating thromboplastic substances in its scope. The prothrombin time, because it uses thromboplastin itself, cannot detect such changes.[13] The thromboplastin generation test and platelet adhesiveness tests[14] require more tedious technique, which limits their usefulness in a clinical setting.

The data presented in our study are intended merely to show that the dilutional PTT may be altered in certain conditions and not to explain the cause of the alteration. However, certain speculations may be advanced. Excellent reviews of the subject of hypercoagulability have been presented by Sise et al,[1] Erichson,[2] and Keller.[3] They all mention the possibility that thromboplastic substance released from the placenta may enter the maternal circulation and produce adverse effects. This circumstance may lead to the production of increased thrombophlebitis in the peripartum period. Paradoxically, the release of thromboplastic substances, as in abruptio placenta, may increase utilization and depletion of coagulation factors and lead to hemorrhage.[15] Because of increased thromboplastic activity, fibrinolysis may be enhanced to counterbalance hypercoagulability. If grossly altered it may also lead to excessive bleeding. Thus, a condition of hypocoagulability may result from an initial hypercoagulable state.

An additional danger related to hypercoagulability in the obstetrical patient is preëclampsia. Vassalli and McClusky[16] have demonstrated by electron-microscopic techniques that there are local fibrin deposits in the glomeruli of patients with preëclampsia. They have proposed the existence of a slow state of intravascular coagulation, possibly initiated by material liberated from the placenta.

The abnormalities manifested by shortening of the dilutional PTT in our patients may be the result of substances similarly released in the process of parturition. The result obtained in the patient having preëclampsia and numerous placental infarctions would be consistent with these theories.

Decreased clotting times and elevations of Factor VIII in patients who have malignancies have been reported.[17] Bronchogenic carcinoma, malignant melanoma, multiple myeloma, and Hodgkin's disease have been associated with the hypercoagulable state. The release of tissue thromboplastin or related substances may produce abnormalities noted in the dilutional PTT. Indeed, tissue thromboplastin is high in the lung. A necrotizing or invasive tumor may well lead to its release and inducement of foreshortening of an appropriate test. In our small series 4 of 6 patients with bronchogenic carcinoma had foreshortened times. The results obtained in patient C.S. (table 2) suggest that further investigation of the association of abnormal dilutional PTT's and thromboembolic phenomena in patients with malignant lesions is warranted.

A pharmacologic condition previously associated with increases in various coagulation factors has been noted in patients who take oral ovulatory inhibitors.[11, 18, 19] The clinical significance of such increases is still under considerable debate.[17] Donayre and Pincus[20] found an increase in Factor VII, VII-X complex, and fibrinogen. Prothrombin and fibrinolysis were also increased, but they stated that V, VIII and X are not increased. Thomson and Poller,[19] though finding VII increased, found no change in the 100 per cent cephalin and TGT. Egeberg and Owren[11] have found increased Factor VIII and a minimally shortened PTT. The finding of the foreshortened time in our patient immediately after cessation of a progestational agent indicates that further use of the test in such pharmacologic conditions is indicated.

Summary

Data have been presented which we believe show that the dilutional PTT may be altered in patients having conditions which have been associated with an increased tendency of the blood to clot. We are embarking on further studies in an attempt to more fully delineate and correlate the abnormal time with individual factors and thromboelastography, to follow normal females during menstrual cycles both physiologic and associated with ovulatory inhibitors, and in a controlled manner attempt to correlate foreshortened times of plasma from patients who have thromboembolic disorders.

References

1. Sise, H. S., Mesches, C. B., and Becker, R.: Amer. J. Med., 1962, **33**, 667.
2. Erichson, R. B.: New York J. Med., 1965, **65**, 1091.
3. Keller, F.: Ann. Intern. Med., 1965, **62**, 744.
4. Freiman, D. G., Suyemoto, J., and Wessler, S.: New Eng. J. Med, 1965, **272**, 1278.
5. Poller, L., and Thomson, J.: Lancet, 1964, **2**, 62.
6. Spittell, J. A., Jr., Pascuzzi, C. A., Thompson, J. H., Jr., and Owen, C. A., Jr.: Proc. Mayo Clin., 1960, **35**, 37.
7. Amundsen, M. A., Spittell, J. A., Jr., Thompson, J. H., Jr., and Owen, C. A., Jr.: Abstracted, Ann. Intern. Med., 1962, **56**, 683.
8. Stefanini, M., and Dameshek, W.: The Hemorrhagic Disorders. New York: Grune & Stratton, 1962, pp. 477–479.
9. Shapiro, S., Sherwin, B., Redish, M., and Campbell, H. A.: Proc. Soc. Exp. Biol. Med., 1942, **50**, 85.
10. Smith, G. F., Dammin, G. J., and Dexter, L.: J.A.M.A., 1964, **188**, 143.
11. Egeberg, O., and Owren, P. A.: Brit. Med. J., 1963, **1**, 220.
12. Moquin, R. B., and Klumpp, L.: Unpublished observations.
13. Lenehan, J.: Personal communication.
14. Strauss, H. S., and Bloom, G. E.: New Eng. J. Med., 1965, **273**, 171.
15. Bonnar, J., and Crawford, J. M.: Lancet, 1965, **1**, 241.
16. Vassalli, P., and McClusky, R. T.: Amer. J. Med., 1965, **39**, 179.
17. Eastham, R. D., and Morgan, E. H.: Lancet, 1964, **2**, 543.
18. Winter, I. C.: Metabolism, 1965, **14**, 422.
19. Thomson, J., and Poller, L.: Brit. Med. J., 1965, **2**, 270.
20. Donayre, J., and Pincus, G.: Metabolism, 1965, **14**, 418.

Some Unusual Aspects of Pheochromocytoma

Report of Four Cases

COMMANDER J. SODE, MC, USN*, LIEUTENANT J. E. ZIMMERMAN, MC, USN*,
LT. COMMANDER D. O. CASTELL, MC, USN*, AND M. R. POWELL, M.D.†

THE CLINICAL VAGARIES of pheochromocytoma are well known and have been ably reviewed in the recent literature.[1, 2, 3] The purpose of this report is to describe some interesting features of this disease which we have observed on the wards of a large general hospital during the past 3 years.

Report of Cases

Case 1. A 24-year-old Negro was admitted to the Orthopedic Service with acute low back pain. During the initial interview he volunteered a 2-year history of hiccups. Further questioning revealed that at first this occurred about once a month but later became more frequent and associated with sweating, palpitation, throbbing right parietal headache, and at times throbbing pain down both arms. Symptoms tended to occur after a heavy meal and upon retiring for the night. They lasted from 2 to 15 minutes and usually could be terminated by getting up and moving around. During the month prior to admission symptoms occurred 3 to 4 times daily. There was no weight loss, nervousness, abdominal pain, flushing or blanching of the extremities.

The patient had sought medical attention for his hiccups. Tranquilizers and antispasmodics were administered without benefit. Blood pressure determinations prior to admission had always been normal. He came to accept the hiccups as an invariable penance for an enjoyable meal. He and his wife coined the slogan, "It's hiccup time." Shortly following admission to the Orthopedic Service he experienced such an episode and was found to have a blood pressure of 280/152.

Physical examination revealed grade II Keith-Wagener hypertensive retinopathy and a grade I ejection murmur at the base of the heart. The blood pressure fluctuated from 130/80 to 200/130 and rose to as high as 300/160 during symptomatic paroxysms. A distinct epigastric bruit without radiation into the flanks was intermittently observed. Palpation of the abdomen, flanks and bladder area failed to induce paroxysms.

Phentolamine and histamine tests were positive, but no paroxysm followed injection of glucagon.[4] Urinary VMA (3-methoxy-4-hydroxymandelic acid), metanephrines, and catecholamines were elevated (table 1). An I^{131}-hippuran study performed during a symptomatic paroxysm is shown in figure 1. Dibenzyline® (phenoxybenzamine) therapy eliminated paroxysms and was continued through the morning of surgery. On the seventy-first hospital day the left adrenal gland, which contained a 5 by 4.5 by 2 cm. pheochromocytoma weighing 24.45 Gm., was removed. Blood pressures, urinary VMA's, and tyramine test were normal after surgery.

Comment. The presentation of pheochromocytoma as recurrent postprandial hiccup is unusual. Although later hiccup was associated with the classical features of pheochromocytoma it remained the most distressing symptom to the patient and the only one he volunteered during the initial interview. Unexplained hiccups may be added to the variegated spectrum of pheochromocytoma since it has been known to occur in at least 2 other patients.[5]

Case 2. A 24-year-old housewife was discovered to be hypertensive in July 1965. Normal blood pressures were recorded throughout her pregnancy in 1964 and in April 1965. During the 6 weeks preceding discovery of hypertension she experienced a 7-pound weight loss, nervousness, tremors, and intermittent episodes of sweating with headache. In the hospital she had sustained hypertension (150–170/100–120), persistent tachycardia (100–120 per minute), and 10- to 15-minute episodes of sweating with further rise in pulse rate. She complained of persistent numbness and tingling over the ulnar aspect of the left hand.

Physical examination revealed slightly dilated pupils, grade III Keith-Wagener hypertensive retinopathy, and a grade II midsystolic murmur at the apex. The liver was palpable 4.5 cm. below the right costal margin. The remainder of the physical examination was normal.

The phentolamine test was positive. Urinary VMA,

---

* From the Department of Medicine (Endocrinology Branch), United States Naval Hospital, National Naval Medical Center, Bethesda, Md. 20014.

† Present address: Donner Laboratory, University of California, Berkeley, Calif. 94720.

TABLE 1: Plasma Catecholamine, Urinary VMA, Urinary Catecholamine, and Urinary Metanephrine Determinations in Cases 1, 2, 3 and 4

Case	Urinary VMA (mg./24 hr.)			Urinary Metanephrines (mg./24 hr.)	Urinary Catecholamines (µg./24 hr.)		Plasma Catecholamines (µg./L.)	
	Low	High	Mean		Total	Per cent Epinephrine	Epinephrine	Norepinephrine
1	9.1	20	14.6	3.0 mg.	1,065 1,081 1,143 997	16.9 16.7 13.8 20.5		
2	32	38	35.0	13.0 mg.	4,415 6,111 4,775	9.5 16.5 12.5	3.7	29.9
3	8.2	18	14.4	8.0 mg. 6.6 mg. 9.2 mg.	2,283 1,771	15 15	Less than 0.3	7.9 15.6
4	6.2	35	17.0	8.6 mg.	2,000	0	see table 2	
Normal values	Less than 10 mg.			Less than 1.3 mg.	Less than 100 µg.		Less than 0.2 µg.	Less than 4 µg.

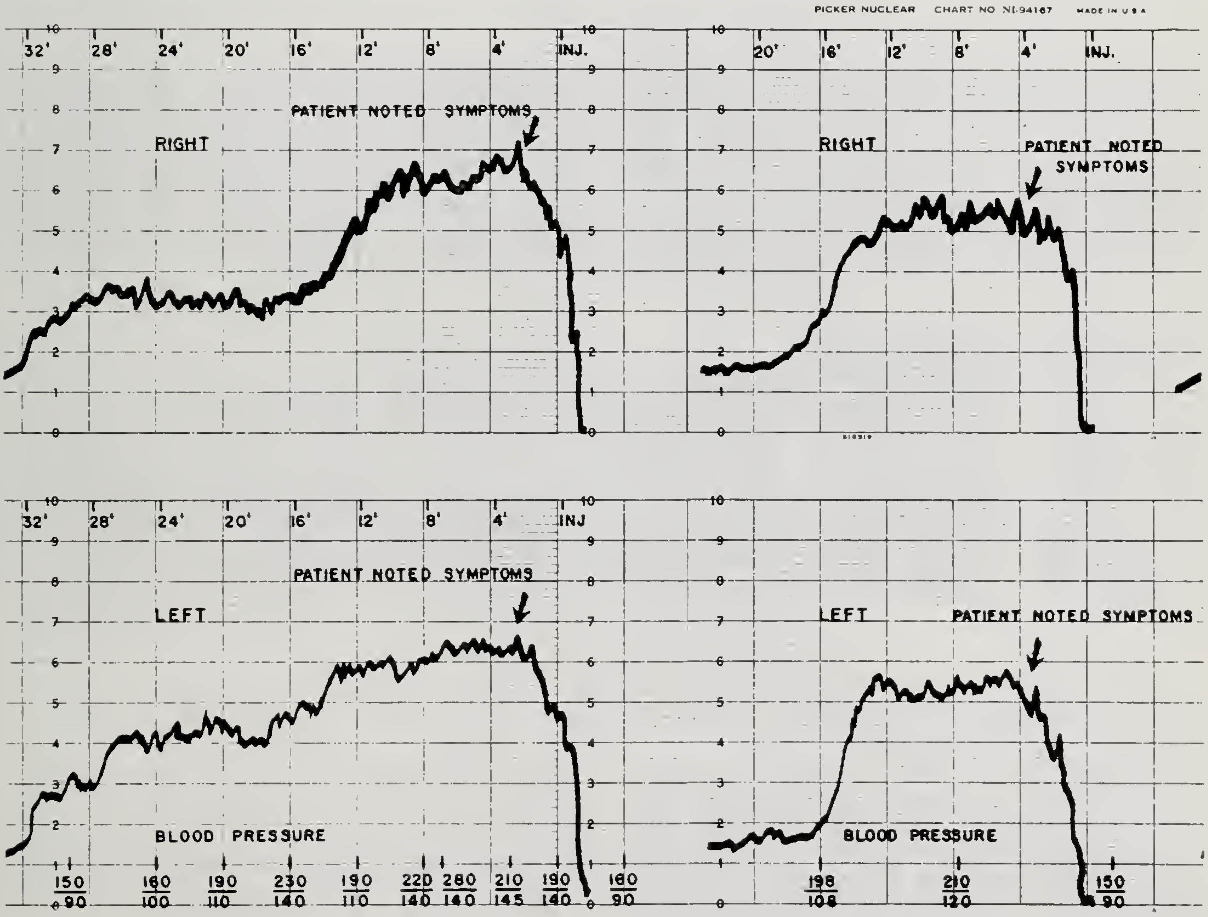
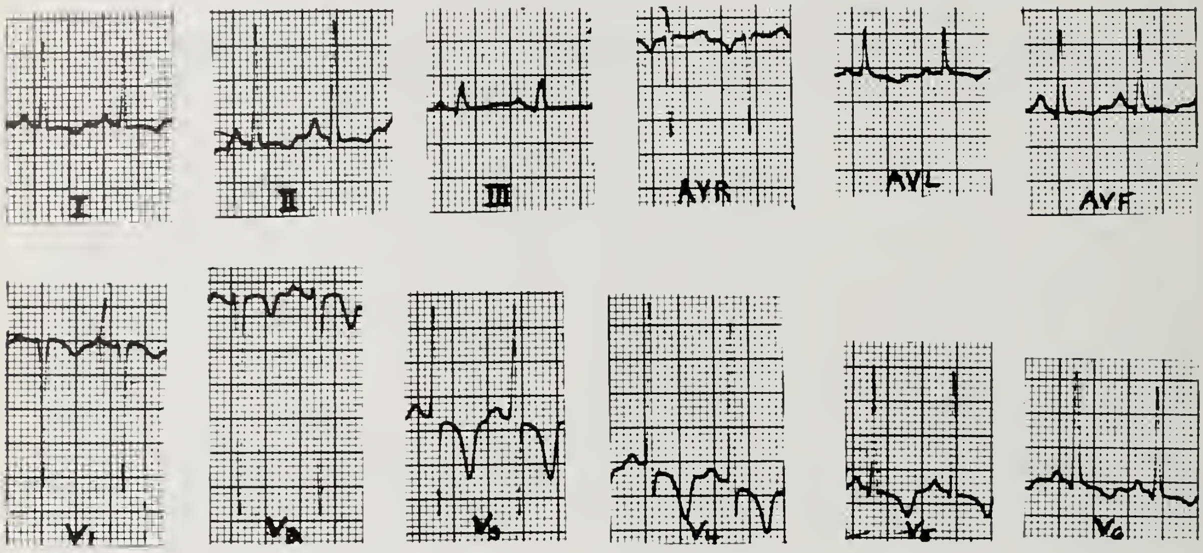


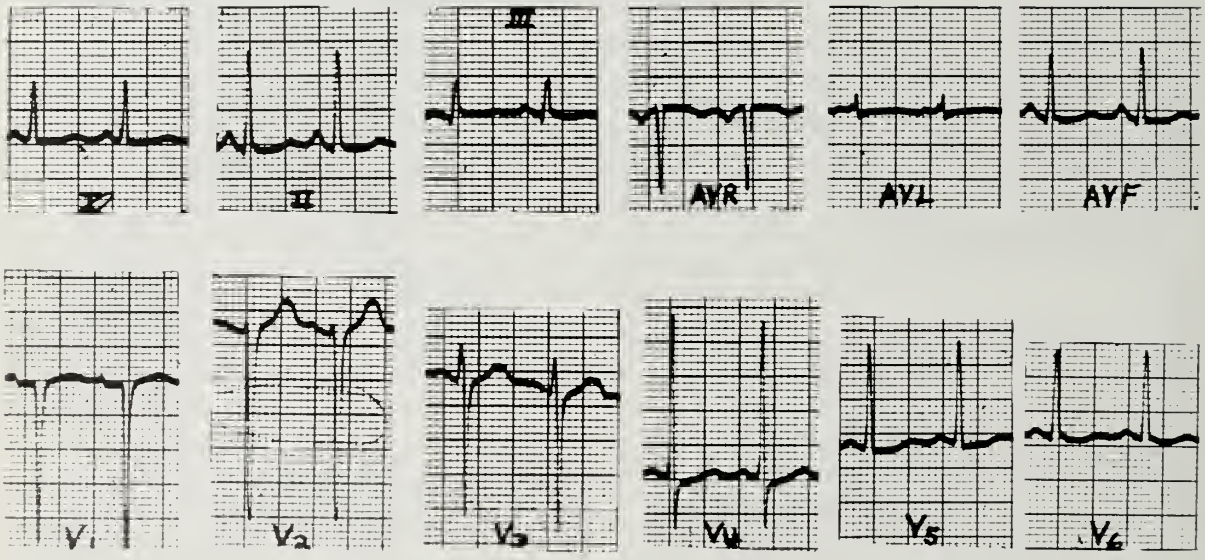
FIG. 1. Right: renogram during mild symptomatic paroxysm. Left: renogram 10 minutes later during more severe and sustained paroxysm with blood pressure as high as 280/140.

metanephrines, and catecholamines were elevated (table 1). Electrocardiograms are shown in figure 2.

Symptoms and electrocardiographic abnormalities gradually subsided with the use of Dibenzyline. After 2 months of therapy left adrenalectomy was performed, and a 5.2 by 4 by 3 cm. pheochromocytoma weighing 33 Gm. was removed. On the second postoperative day the patient developed congestive heart failure. Response to digitalis and diuretics was excellent, and all medications were discontinued on the ninth postoperative day. Blood pressures, urinary VMA's, and tyramine test were normal after surgery.



A. BEFORE DIBENZYLINE



B. AFTER 2 MONTHS OF DIBENZYLINE

FIG. 2. Electrocardiograms in case 2 before and after 2 months of Dibenzyline therapy. Note: ST-segment depression, T-wave inversion, and normalization following Dibenzyline therapy.

Comment. This patient presented the classical features of pheochromocytoma, and the diagnosis was never in doubt. Of interest are her electrocardiograms showing ST-segment depression and deep symmetrical T-wave inversion consistent with catecholamine cardiomyopathy (figure 2). These abnormalities gradually reverted under Dibenzyline therapy. Despite electrocardiographic improvement, surgical stress led to transient congestive failure in this young woman with no previous history of heart disease.

Case 3. A 28-year-old white sailor was admitted complaining of blurred vision and severe frontal headaches of 36 hours' duration. Further questioning elicited a history of increased sweating for several months prior to admission.

Physical examination revealed a blood pressure of 210/140, a pulse of 110 per minute, grade IV Keith-Wagener hypertensive retinopathy with papilledema, warm moist skin, and severe blanching of the hands and feet. A soft grade II early systolic murmur was heard at the base of the heart. A distinct systolic bruit was present in the epigastrium with transmission to the right upper quadrant. No blood pressure change was elicited with vigorous palpation of the abdomen, flanks and bladder area. The phentolamine test was positive, but a decrease in blood pressure from 210/100 to 164/106 was also noted after 6 grains of Sodium Amytal®. Therapy with intramuscular reserpine and oral hydrochlorothiazide, 100 mg. daily, resulted in a decrease in blood pressures to average levels of 175/115. Hypokalemic alkalosis developed during treatment with hydrochlorothiazide in spite of administration of 2 Gm. of potassium chloride daily. Radiorenography revealed decreased function on the right side. Initial VMA was reported as normal, but subsequent determinations were clearly elevated as were initial urinary metanephrines. The patient became normotensive on 60 mg. of Dibenzyline daily. The epigastric bruit disappeared, and the 131-hippuran renogram became normal.

After 4 weeks of oral therapy with adrenergic blocking agents (phentolamine and later Dibenzyline) exploratory laparotomy was performed. A 3 by 4 by 5 cm. pheochromocytoma of the left adrenal gland was removed. Following surgery the patient remained normotensive. Urinary VMA's were normal, and the histamine test was negative.

Comment. Upper quadrant bruit, associated with ipsilaterally abnormal renogram and development of hypokalemic alkalosis on hydrochlorothiazide in spite of potassium supplements in a young patient with malignant hypertension of recent onset suggested renovascular disease. This would have led to arteriography had the clinical suspicion of pheochromocytoma been abandoned on the basis of a single normal urinary VMA report. This procedure is not without danger in chromaffin tumors, and deaths from arteriography have been reported.[6]

Case 4. A 15-year-old boy was admitted for evaluation of recurrent hypertension. At the age of 6 right adrenalectomy had been performed with removal of a pheochromocytoma. Two years later a second pheochromocytoma was removed from the right cervical sympathetic chain. After both procedures the blood pressure and plasma catecholamines returned to normal. He remained well until 6 months prior to admission, when easy fatigability, failure to gain weight in spite of increased appetite, nervousness, and palpitations were noted. The blood pressure varied from 180/110 to 270/170. His mother, maternal aunt, and first cousin had undergone surgery for pheochromocytoma.[7]

Physical examination revealed a blood pressure of 190/150, a pulse rate of 120 per minute, grade IV Keith-Wagener hypertensive retinopathy, and grade II holosystolic murmur at the left sternal border. Previous surgery had resulted in right-sided ptosis, miosis, and anhidrosis. The remainder of the physical examination was normal.

A phentolamine test was positive. Urinary VMA was intermittently elevated. Plasma catecholamine levels during vena cava catheterization are shown in table 2. Hypertension responded to the use of Dibenzyline, but therapy was intermittent and was not continued through the day of surgery. At exploration a 5 by 6 by 3 cm. pheochromocytoma was found medial to the inferior pole of the left renal pedicle. Wide swings of blood pressure and bigeminy responding to intravenous Regitine® were encountered during tumor mobilization. Hypotension, requiring vasopressors, occurred after the tumor was removed.

TABLE 2: Plasma Catecholamines at Various Levels during Inferior Vena Cava Catheterization

Location of Sample	Epinephrine (μg./L)	Norepinephrine (μg./L)
Inferior vena cava—L-4	4.0	26.2
Inferior vena cava—right renal vein	5.3	31.4
Inferior vena cava—L1-L2	15.8	91.1
Inferior vena cava—T12-L1	6.5	37.1
Inferior vena cava—diaphragm	9.2	42.8
Right atrium	5.7	34.6
Superior vena cava (low)	4.8	33.6
Superior vena cava (high)	6.5	35.0

The blood pressure was normal on the first postoperative day when the patient was receiving frequent analgesics. On the second postoperative day the blood pressure rose and subsequently averaged 170/110. Hypertension persisted despite Dibenzyline therapy. Postoperative urinary VMA's were 12.5 and 11.2 mg. per 24 hours.

Comment. This case illustrates the problem of recurrent familial pheochromocytoma and the value in tumor localization of multiple blood sampling during vena cava catheterization.[8] It also illustrates the problem of persistent hypertension after successful removal of a pheochromocytoma. In such a situation the diagnostic challenges include the presence of other chromaffin tumors, metastatic spread, preëxisting essential hypertension, and renal hypertension from nephrosclerosis or injury to the renal vasculature.

Discussion

Pheochromocytoma, unless malignant, is a curable disease. If unrecognized, it can lead to sudden death during paroxysms. Among its unusual presentations have been gastrointestinal bleeding,[9] nocturnal seizures,[10] and, in 1 instance, paroxysmal shock.[11] If such bizarre diagnostic challenges are to be met successfully, a high index of suspicion must constantly be maintained.

In case 1 paroxysmal hiccup was the only clue to the presence of pheochromocytoma for almost 1 year. Hiccup was controlled with Dibenzyline therapy and has not recurred postoperatively. It is therefore likely that it was related in some way to the paroxysmal discharge of catecholamines. Hiccup results from stimulation of any part of the singultus reflex arc and may be of central or peripheral origin. The hiccup center is located in the medulla near the respiratory and vomiting centers. Afferent impulses are carried by sensory fibers of the vagus and phrenic nerves. Efferent impulses travel in the phrenic nerve to the diaphragm. Central hiccup may result from direct stimulation of the spinal cells of origin of the phrenic nerve or be mediated through higher centers, including the posterolateral and dorsomedial thalamic nuclei, the hypothalamus, and the reticular formation.[12] Experimental infusions of catecholamines have increased cortical activity in the cat. It has been shown that this increased activation is due to stimulation of the activating mesencephalic reticular system.[13] Since catecholamines directly activate the reticular system, it is possible that a central mechanism was responsible for the paroxysmal hiccup in our patient. Prolonged infusions of norepinephrine have induced great dilatation of the large bowel in rabbits.[2] This could induce singultus by direct stimulation of the diaphragm.

The presence of abdominal bruit with unilaterally abnormal renogram in pheochromocytoma has not previously been described. This patient (case 3) will be reported elsewhere in detail.[14] Both findings disappeared on Dibenzyline therapy and could not be reproduced postoperatively during short-term infusions of norepinephrine. It is therefore likely that they were related to the effects of prolonged elevation of circulating catecholamines. Segmental constriction of vessels in the carotid artery system has been demonstrated in a patient with pheochromocytoma during arteriography.[15] Renal vasoconstriction during infusions of norepinephrine has been shown to occur in dogs, with alterations in arteriograms persisting up to 3 hours after the blood pressure returned to normal.[16] The changes in renogram in case 1 (figure 1) appear to represent the oliguric state during a paroxysmal discharge of catecholamines. Experimentally, small doses of norepinephrine can increase urine flow by blocking release of antidiuretic hormone. High doses also block antidiuretic hormone release, but urine flow is decreased because of concomitant severe depression of glomerular filtration rate.[17]

Myocardial alterations consisting of focal necroses, subepicardial and subpericardial hemorrhages, and inflammatory reactions have been produced experimentally in animals by means of norepinephrine infusions.[18] Similar myocardial lesions have been found in patients who died because of pheochromocytoma.[19] Electrocardiographic alterations including ectopic rhythms, ST-segment depression, and T-wave inversion have been reported in normal subjects during epinephrine and norepinephrine infusions.[20] Sayer et al[21] have reviewed the electrocardiographic abnormalities in pheochromocytoma, emphasizing the importance of amount, duration and type of catecholamine secreted in their pathogenesis. Electrocardiographic improvement has occasionally been observed during positive phentolamine tests.[13] Since Dibenzyline therapy is well tolerated and fully controls the clinical manifestations of pheochromocytoma,[22] a period of treatment with this drug is desirable in patients with evidence of catecholamine cardiomyopathy (case 2). Alpha-methyl-para-tyrosine, which has been shown to block catecholamine synthesis,[23] may prove to be superior to peripheral adrenergic blocking agents in this respect.

The blood pressure usually falls immediately after successful removal of a single functioning pheochromocytoma (cases 1, 2 and 3). Persistent hypertension (case 4) suggests the possibility of multiple tumors, especially if the pheochromocytoma is known to be familial. Since benign and malignant chromaffin tumors cannot be distinguished histologically, there is always the possibility of metastatic spread. In either case the chemical findings of pheochromocytoma should remain. Multiple determinations of catecholamines and their metabolites may be necessary to exclude unrecognized tumors, since secretion may be intermittent, and the metabolic pathways of the second tumor need not conform to those of the first one.[24] Determinations may have to be performed under pharmacologic stimulation with tyramine or histamine. Since modest elevation of catecholamines can be due to postoperative stress, a definitive diagnosis may not be possible during the early postoperative period. Other causes for persisting hypertension must also be excluded, such as nephrosclerosis or surgical injury to the renal vascular bed.

Alkaline phosphatase was elevated in 2 of the reported cases (table 3). In none of these patients was there a history of preëxisting liver disease.

TABLE 3: Alkaline Phosphatase Values (Bessy-Lowry)

NORMAL	0.8-2.3
Case 1	2.42
Case 2	2.3
Case 3	4.5, 4.7
Case 4	4.0

Epinephrine causes glycogenolysis through its action on the hepatic-cell membrane. It is also of interest that prolonged infusions of norepinephrine have produced elevations of alkaline phosphatase in dogs.[25] Other laboratory studies have contributed little to diagnosis. Proteinuria occurred at least intermittently in cases 2, 3 and 4. The blood sugar was elevated before Dibenzyline therapy in cases 1, 2 and 3, and was normal in case 4.

At the present time our diagnostic approach to pheochromocytoma is largely pharmacological and chemical. If significant amounts of epinephrine are measured in the urine or the plasma, abdominal exploration through a transverse incision is carried out after limited localization studies. In such cases the tumor is almost certainly in or near the adrenal glands, since the methylating enzyme required for epinephrine formation is found only in the adrenal medulla and organ of Zuckerkandl. Extensive localization studies including sampling of blood for catecholamine content at various levels of the vena cava are reserved for norepinephrine-secreting tumors and for recurrent pheochromocytoma. During the past year all of our patients have undergone preparation with Dibenzyline preoperatively until hypertension and clinical manifestations of pheochromocytoma have been well controlled and until the blood volume has returned to normal. We have continued Dibenzyline through the morning of surgery. The operative course has been very stable. Of the reported cases only the patient of case 3 did not receive adequate preoperative therapy with Dibenzyline. His operative course was much less smooth, and vasopressors were required to control hypotension following the removal of his tumor.

Summary

Hiccup, abdominal bruit, abnormal renogram, elevated alkaline phosphatase, and electrocardiographic abnormalities consistent with catecholamine cardiomyopathy have been presented as less common features in patients with pheochromocytoma. The value of preoperative preparation with adrenergic blocking agents has been discussed.

We wish to thank Drs. A. Sjoerdsma and K. Engleman of the National Institutes of Health, Bethesda, Md., for performing many of the catecholamine determinations and for their advice in caring for these patients.

References

1. Gifford, R. W., and others: Proc. Mayo Clin., 1964, **39**, 281.
2. Baldwin, D.: Presbyt. St. Luke Hosp. Med. Bull., 1963, **2**, 133.
3. Leather, H. M., Shaw, D. B., Cater, J. E., and Walker, B. M.: Brit. Med. J., 1962, **1**, 1373.
4. Lawrence, A. M., and Forland, M.: Proc. Central Soc. Clin. Res., 1964, **37**, 48.
5. Engleman, K.: Personal communication.
6. Saltz, N. J., Luttwak, E. M., Schwartz, A., and Goldberg, G. M.: Ann. Surg., 1956, **144**, 118.
7. Cone, T. E., Jr.: Pediatrics, 1958, **21**, 994.
8. McGuire, L. B., and Fox, L. M.: Ann. Intern. Med., 1964, **60**, 125.
9. Gendel, B. R., and Ende, M.: Gastroenterology, 1951, **19**, 344.
10. Bell, M. A., Blakemore, W. S., and Rose, E.: Ann. Intern. Med., 1962, **57**, 406.
11. Richmond, J., Frazer, S. C., and Millar, D. R.: Lancet, 1961, **2**, 904.
12. Stotka, V. L., Barcay, S. J., Bell, H. S., and Clare, F. B.: Amer. J. Med., 1962, **32**, 313.
13. Hermann, H., and Mornex, R.: Human Tumors Secreting Catecholamines. New York: Macmillan, 1964, p. 170.
14. Powell, M. R., Castell, D. O., and Sode, J.: Ms. in preparation.
15. Armstrong, F. S., and Hayes, G. J.: J. Neurosurg., 1961, **18**, 843.
16. Voudoukis, I. J., and Boncek, R. J.: Amer. J. Physiol., 1962, **202**, 888.
17. Langston, J. B., Guyton, A. C., DePoyster, J. H., and Armstrong, G. G., Jr.: Ibid., 1962, **202**, 893.
18. Szakacs, J. E., and Mehlman, B.: Amer. J. Cardiol., 1960, **5**, 619.
19. Szakacs, J. E., and Cannon, A.: Amer. J. Clin. Path., 1958, **30**, 425.
20. Lepeschkin, E., and others: Amer. J. Cardiol., 1960, **5**, 594.
21. Sayer, W. J., Moser, M., and Mattingly, T. W.: Amer. Heart J., 1954, **48**, 42.

(*Continued on page 348*)

Congenital Absence of the Vagina: Embryology, Diagnosis, and Management

Report of Five Cases

LIEUTENANT ROBERT C. NORTHCUTT, MC, USNR*, AND
LT. COMMANDER PAUL B. UNDERWOOD, JR., MC, USNR†

SINCE THE ESTABLISHMENT of a clinical cytogenetics unit at the U.S. Naval Hospital, Bethesda, Maryland, 5 cases of congenital absence of the vagina have been evaluated. These cases are reported, emphasizing their initial presentation, differential diagnosis, anatomic abnormalities, and management.

Report of Cases

Case 1. J.L., a 16-year-old Caucasian female, was first seen in March 1964 for primary amenorrhea and mild lower abdominal pains of several weeks' duration. She had had a normal childhood development and good health for her entire life. Her breast and pubic hair had developed at a normal age. Her mother and older sister had a normal menstrual history.

Physical examination in the outpatient clinic revealed a well-developed, attractive 16-year-old who appeared feminized. She had normal breasts and nipples, soft, nontender abdomen without masses, a female escutcheon, normal clitoris, and normal labia. The hymen appeared imperforate, and rectal examination was described to reveal "a spongy, dilated vagina with a small cervix and corpus felt at the top."

She was admitted to the hospital where under anesthesia the "hymen" was incised and the rectovesical space was explored for a depth of 7 cm. without the vagina being identified. The examiner could not palpate a cervix or uterus on rectal examination.

Additional evaluation revealed normal urinary steroids, chest roentgenogram, and intravenous pyelogram. A buccal smear was positive for Barr bodies, and chromosomal studies revealed 46 chromosomes with an "XX" sex chromosome complement. It was then apparent that she was a genetic female with congenital absence of the vagina and uterus. Further surgery has been postponed until she is older.

Case 2. V.S. was first seen in March 1964 at 15 years of age for primary amenorrhea. Thelarche and mammarche occurred at age 10 and pubarche a year later. A history was obtained of congenital webbing of the toes of her left foot which had been surgically corrected. Her childhood development had been considered normal. Her mother had a normal menstrual history and a sister 1½ years younger was menstruating regularly.

Examination in the outpatient clinic revealed a well-developed, normal-appearing young female, who was 61 inches tall. She had well-developed breasts and nipples, a female escutcheon, normal clitoris and labia, and what was believed a vagina. A stated inadequate rectal examination failed to identify any pelvic organs. The mother was reassured, and no further studies were done.

When the patient was next seen in February 1965 for continued amenorrhea the examiner could not identify a vagina. She was hospitalized, and evaluation revealed normal hemogram, urinalysis, urinary steroids, chest roentgenogram, and intravenous pyelogram. A buccal smear was chromatin-positive (figure 1). Tissue culture for chromosomal analysis demonstrated a normal female pattern (figure 2). Examination under anesthesia revealed absence of the vagina, and neither uterus nor ovaries could be identified.

On a subsequent admission a laparotomy showed bilateral normal ovaries with the Fallopian tubes and uterus represented by bilateral thickened bands of fibromuscular tissue which fused in the midline posterior to the bladder. Normal-appearing round ligaments inserted into each band. Neither the cervix nor vagina could be identified. Biopsy of the right gonad revealed normal ovarian tissue with a corpus luteum. An incidental appendectomy was performed. The patient is being followed with plans for a vaginoplasty at a future date.

Case 3. S.F. first presented herself at the U.S. Naval Hospital, Annapolis, Md. in May 1964 with a complaint of never having had a menstrual period. At this time she was 25 years of age and had been married for 3 years. She had not been seen for this problem since the age of 15 years when she had been treated with "hormones" but failed to menstruate. The patient's past medical history and family history were noncontributory.

---

* Staff, Radiology Service, United States Naval Hospital, National Naval Medical Center, Bethesda, Md. 20014.

† Staff, Obstetrical-Gynecological Service, United States Naval Hospital, National Naval Medical Center.

Physical examination revealed a normal female habitus with well-developed breasts and female hair distribution. On pelvic examination normal external genitalia with a 4–5 cm. deep blind vaginal pouch was found. On bimanual rectal examination neither cervix nor fundus was palpable, but the ovaries were believed to be felt bilaterally.

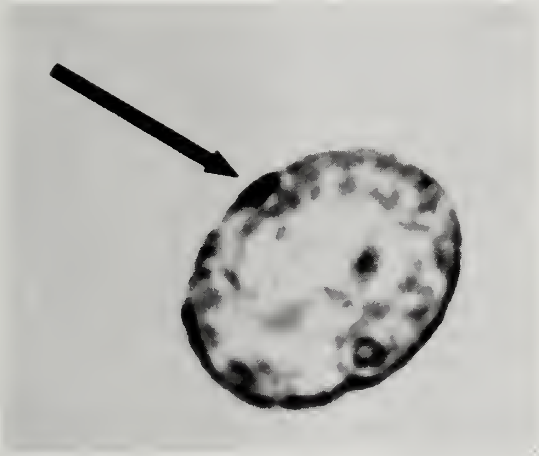


FIG. 1. Buccal mucosal cell from patient V.S. showing the sex-chromatin body at the periphery of the nucleus.

Diagnostic studies included normal chest and skull roentgenograms, intravenous pyelogram, blood urea nitrogen, protein-bound iodine, urinary estriol, gonadotropins, and 17-ketosteroids. A buccal smear was sex-chromatin positive, and chromosome analysis of peripheral lymphocyte culture revealed a normal female karyotype.

Examination following induction of spinal anesthesia was confirmatory of the previous pelvic examination. Laparotomy revealed normal-appearing ovaries and Fallopian tubes with a midline band structure thought to be a vestigial uterus. Bilateral gonadal biopsy showed normal ovarian tissue with follicles and 1 corpus luteum. Following discharge no further therapy has been contemplated since this vaginal pouch was functional.

Case 4. A.S., a 15-year-old Caucasian female, prior to her first presentation to her local private physician, had had a completely normal childhood and adolescence except for failure to menstruate. The patient was the fourth in a sibship of 5 girls, the others all menstruating normally with an average menarche of about 12½ years of age.

She was referred to a gynecologist, who found her general physical examination within normal limits, and her habitus, fat and hair distribution, and body proportions those of a normal adolescent female. Examination of the genitalia revealed a normal clitoris and labia. There was no vagina except for a "dimple" below the urethral orifice. Rectal examination failed to reveal a uterine cervix or fundus. A diagnosis of vaginal aplasia was made, and a buccal smear was performed and read as "probably chromatin negative." The patient was referred to this laboratory where the buccal smear was repeated and found to be chromatin-positive, and confirmation by chromosome analysis of peripheral leukocytes demonstrated a normal female 46/XX pattern.

Subsequently the patient was examined under anesthesia, and the absence of the uterus and vagina was confirmed. Ovaries were not palpable. Plans currently are to follow the patient and create an artificial vagina at a later date.

Case 5. M.K., a 12½-year-old Caucasian girl, was referred to this hospital with a 1-month history of recurrent lower abdominal cramping pain and a diagnosis of hematocolpos. She had a history of congenital exstrophy of the urinary bladder revised at 9 months of age. A sigmoid colostomy was performed with transplantation of the ureters into the rectum at 18 months of age, both of which have since been functionally satisfactory.

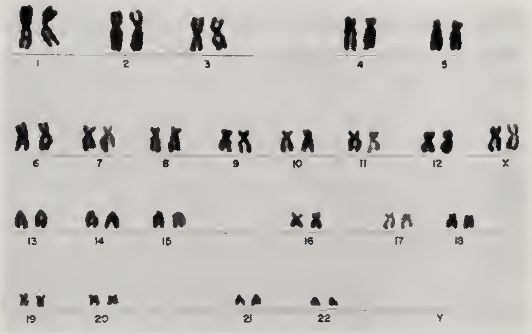


FIG. 2. Karyotype prepared from a peripheral lymphocyte culture obtained from patient V.S. showing a normal female chromosome complement.

Approximately 1½ years prior to admission she began to develop breasts and pubic hair. One month prior to admission she developed acute lower abdominal cramping pains and pelvic pressure requiring her to seek medical attention. She was found to have no vaginal orifice, and a 12 cm. tender pelvic mass was noted on rectal examination. At the time of admission she was a well-developed, apparently normal female with a height of 58 inches. She had well-developed breasts, operative scars over the lower abdomen with a left lower abdominal sigmoid colostomy, female escutcheon, and normal labia and vestibule. A vaginal orifice was not present. A rectal examination revealed a 12–15 cm. tender cystic mass filling the pelvis and extending halfway to the umbilicus. It extended inferiorly to within 1 cm. of the perineum and was anterior to the rectum.

At operation an incision was performed in the area of an expected vagina and extended into the mass which contained 300 c.c. of brown blood. The dilated cervix was visualized, but because of the abdominal scars the uterus could not be palpated. The wall of the vagina and the skin of the perineum were undermined and brought together, closing the 2 cm. gap. A wooden tube 3½ cm. in diameter was left in place to insure an adequate orifice and to permit drainage. Primary healing occurred. The patient was discharged 3 weeks following surgery, at which time she was cleaning and reinserting her own prosthesis daily. It was to be worn constantly for 1 month, then only at night for 3 months.

Discussion

The first 4 patients initially sought medical attention as a result of primary amenorrhea despite normal female secondary sexual characteristics and development. The fifth patient, although also amenorrheic with normal feminization, first presented with recurrent cramping lower abdominal pain. All showed evidence of apparently normal ovarian endocrine function with no signs of virilization. Normal female fat and hair distribution, well-developed nipples and breasts, and normal clitoris and labia were present in each.

Patients S.F., M.K., and A.S. had initial pelvic findings confirmed by examination under anesthesia and/or laparotomy. Patient J.L. was first thought to have an imperforate hymen with hematocolpos, and patient V.S. was initially diagnosed to have a vagina since a cotton tip applicator had been introduced into an orifice with ease (apparently the urethra). Subsequently, under anesthesia examination showed these findings to be in error. These initial interpretations of pelvic findings without anesthesia resulted in rectovaginal septal exploration in J.L. and false reassurance and delay of definitive diagnosis in V.S. We believe that these erroneous findings were the result of difficult and inadequate examinations frequently encountered in adolescent patients. We, therefore, recommended that careful examination under anesthesia be performed when inconsistencies exist between the history and the physical findings.

Developmental anatomy. To better understand the congenital anomalies of the vagina and uterus one needs to consider its embryology.[1, 2] The vagina is derived by a joining of the distal fused müllerian ducts to the urogenital sinus. By the eleventh gestational week the distal portion of the 2 müllerian ducts have fused to form a single cavity. The wall of the superior portion of this cavity rapidly thickens and sharply demarcates itself, forming the uterine corpus and cervix. The inferior portion elongates caudally and fuses with 2 columns of cells, the sinovaginal bulbs, which are derived from the urogenital sinus. At about 17 to 18 weeks the core of the sinovaginal bulbs degenerates and forms a cavity which connects the fused inferior müllerian ducts to the urogenital sinus which at this stage of growth remains only as the vestibule. The band of tissue circumscribing the aperture between the sinovaginal bulbs and the vestibule becomes the hymen. The percentage of vagina derived from each of these sources is debatable; however, it appears that the majority is müllerian in origin.

Understanding this embryological development of vagina, one can readily see the possible anomalies that can occur:

1. Complete absence of the vagina due to failure of both müllerian and sinovaginal bulb development (patients J.L., V.S., and A.S.).
2. Absence of the upper portion of the vagina due to failure of proper müllerian development, usually associated with absence of the uterus (patient S.F.).
3. Absence of the lower portion of the vagina due to improper sinovaginal bulb development (patient M.K.).
4. A transverse vaginal septum separating the upper and lower vagina due to the failure of fusion of the müllerian ducts to the sinovaginal bulb.
5. Imperforate hymen resulting from lack of rupture of the sinovaginal bulbs into the vestibule.
6. Duplication of the vagina from failure of the midline fusion of the müllerian ducts.

Congenital absence of the vagina is a rare anomaly, and no reported series is statistically adequate to establish an accurate incidence of the various types. Presented here are representative cases of 3 types of this anomaly. During this same period of time we have observed 2 cases of complete duplication of the müllerian system with a double vagina, cervix, and uterus.

The association of vaginal aplasia with urinary tract anomalies is reasonably frequent.[3, 4, 5] Patient M.K. represents such an association. It is therefore suggested that urological evaluation be carried out in all patients with anomalies of the genital tract.

Diagnosis and clinical management. The testicular feminization syndrome and anomalous development of the vagina are the only diagnostic possibilities that exist when normal female secondary sexual characteristics without virilization are present. Although not always noted, decreased pubic and axillary hair, inguinal or labial nodules, and a family history of amenorrheic or multiple female siblings, as with patient A.S., should suggest testicular feminization syndrome. The testicular feminization syndrome is a genetic abnormality present in chromosomally normal 46/XY males who do not have nuclear sex chromatin bodies (Barr bodies) in their somatic nuclei. Therefore, this differential can easily be eliminated without surgical intervention by using a mucosal smear technique for the presence of the sex chromatin body present in the normal female (46/XX) but absent in the testicular feminization syndrome (46/XY). If the sex chromatin body is absent, confirmation of a male chromosome pattern should be obtained by tissue culture, if available, since false negative studies are possible as the test is generally performed.

Apparent congenital absence of the vagina associated with virilization should alert the physician to the possibilities of congenital adrenal hyperplasia, intra-uterine androgen stimulation, male pseudohermaphroditism, or the rare true hermaphroditism.

The basic approach to therapy is surgical, but considerable thought must be given to the timing of surgical intervention. Multiple techniques have been employed for vaginal construction and are adequately presented elsewhere.[6, 7, 8] However, all are technically reasonable procedures but require prolonged postoperative care with complete coöperation on the part of the patient to maintain a functional vagina of adequate dimensions. Briefly, this requires the wearing of an uncomfortable prosthesis for a minimum of 4 months. Consequently, even though the diagnosis is made in the early teens, surgery should be postponed to the late teens or early twenties when the patient is mature enough to realize the importance of a functional vagina and is willing to undertake the prolonged postoperative care necessary.

Surgical intervention will, under some circumstances, be demanded at the time of diagnosis. This occurs when the uterus is present and menstrual blood is being obstructed such as with a complete transverse vaginal septum, imperforate hymen, or as in case of patient M.K., who had a normal upper vagina and an absent lower vagina. In these situations a passage for continuous menstrual drainage must be obtained and maintained. This may be accomplished by the creation of a small fistulous tract or, in certain optimal circumstances, definitive repair may be undertaken.

Summary

Five cases of congenital absence of the vagina have been presented. The mode of presentation, clinical findings, and diagnostic considerations were emphasized. The developmental anatomy, differential diagnosis, and management were discussed.

The authors wish to extend their sincere appreciation to Thomas Talley, HM2, USN, and Larry Alt, HM3, USN, whose technical assistance was invaluable.

References

1. Reid, D. E.: A Textbook of Obstetrics. Philadelphia: Saunders, 1962.
2. Wilkins, L.: The Diagnosis and Treatment of Endocrine Disorders in Childhood and Adolescence, 3rd ed. Springfield, Ill.: Thomas, 1965.
3. Franks, R. C., and Northcutt, R. C.: Female pseudohermaphroditism and renal anomalies. Amer. J. Dis. Child., 1963, **105**, 490.
4. Semmens, J. P.: Congenital anomalies of the female genital tract. Obstet. Gynec., 1962, **19**, 328.
5. Miller, N. F., and Stout, W.: Congenital absence of the vagina. Ibid., 1957, **9**, 48.
6. TeLinde, R. W.: Operative Gynecology, 3rd ed. Philadelphia: Lippincott, 1962.
7. Ball, T. L.: Gynecologic Surgery and Urology, 2nd ed. St. Louis: Mosby, 1963.
8. O'Connor, C. M.: Congenital agenesis of the vagina. Brit. J. Plast. Surg., 1962, **15**, 13.

Gastroduodenal Intussusception

Report of a Case

CAPTAIN T. H. WILSON, JR., MC, USN, F.A.C.S.*

INTUSSUSCEPTION of the stomach into the duodenum is an uncommon occurrence. In 1946 Hobbs,[1] in reporting his analysis of 41 cases culled from the world literature, described a woman he had examined and operated upon in 1937 whose intragastric lipoma had been forced through the pylorus, causing the stomach to be drawn into the duodenum. As he reviewed other reports he concluded that such intussusception could be either complete or partial, depending upon whether the full thickness of the gastric wall or only its mucosa was involved and that the usual etiologic mechanism was that of a benign intragastric tumor being forced through the pylorus by peristalsis drawing varying amounts of stomach with it. He noted that it was difficult in cadavers to make the antral portion of the stomach intussuscept, but that the body and fundus were sufficiently mobile to permit the condition. His case review showed that symptoms were variable but generally were found to be those of episodic gastric obstruction, with melena and hematemesis being quite common. Some authors reported palpating epigastric tumor masses; in 1 case jaundice due to obstruction of the ampulla of Vater was mentioned.

Hobbs pointed out certain helpful radiographic findings which were quite similar to those noted by Lönnerblad[2] in 1933. On a barium study one might anticipate finding a foreshortened stomach with longitudinal rugal folds converging toward, or even beyond the pylorus, with coarse transverse striations external to these, and with a duodenum often nearly devoid of barium but filled with a soft-tissue mass (figures 1 and 2). In 1961 Grönlie and Rosseland[3] reported essentially the same radiographic findings in describing a case of gastroduodenal intussusception. They stated that they could find only 2 reports in which the correct diagnosis was made preoperatively by the radiologist and that these were the 2 of Lönnerblad.

From 1945 to 1953 Child and Braunstein[4] were able to find 6 more reported cases of gastroduodenal intussusception, 5 of them due to benign tumors in the gastric fundus and 1 occurring spontaneously. Representative examples are those reported by Amendola[5] and Cope.[6] Child and Braunstein pointed out that from 1932 to 1950, 1,700 gastric operations had been performed at the New York Hospital (Cornell Medical Center) without this particular condition having been encountered. He reported a case which required surgery because of anemia, melena and epigastric pain, and also because of radiographic interpretation of a tumor in the duodenum. At operation a gastroduodenal intussusception was found and was due to a benign gastric tumor which was locally resected through an anterior gastrotomy.

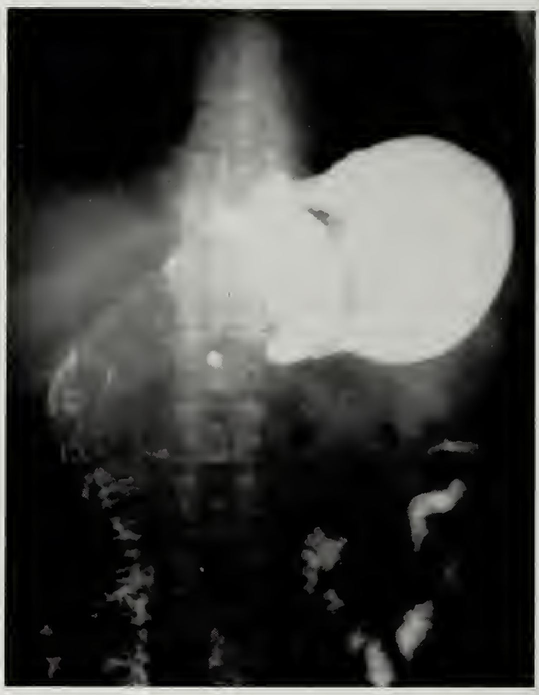


FIG. 1. A-P view of the barium-filled stomach showing classical pattern of gastroduodenal intussusception.

---

* Assistant Chief of Surgery, United States Naval Hospital, National Naval Medical Center, Bethesda, Md. 20014.

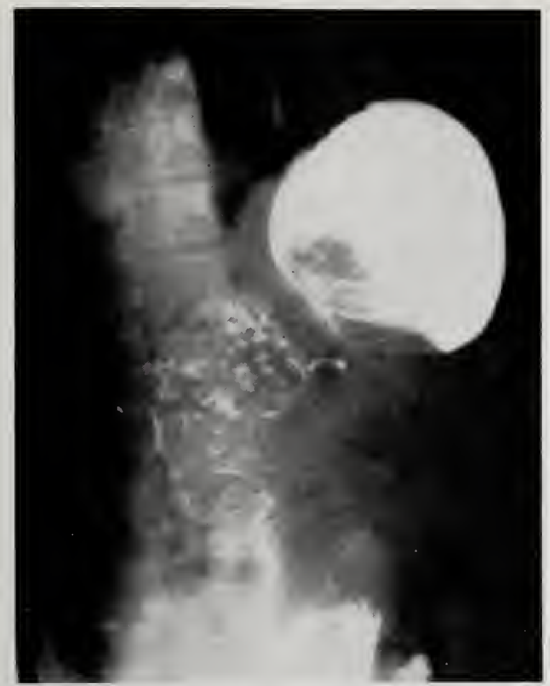


FIG. 2. Lateral view of the barium-filled stomach showing classical pattern of gastroduodenal intussusception.

In 1960 Riccobono[7] studied this condition and found that in about one-half of the collected cases the leading mass was 1 or more adenomatous polyps and that leiomyomas were responsible in 15 per cent. Three examples of lipomas and 1 each of hemangioma and neurofibroma were found. He noted the high incidence of achlorhydria in gastric polyposis but did not mention whether or not achlorhydria was found frequently in conjunction with gastroduodenal intussusception. He added 2 cases to the literature, 1 due to antral polyps and the other to an ulcerated leiomyoma which originated in the fundus. The former required gastric resection, whereas the latter was managed by local removal of the tumor through a gastrotomy.

The case which follows was diagnosed preoperatively by X-ray examination. Motion pictures were taken of the surgical procedure.

Report of Case

A 48-year-old retired Naval Chief was admitted to the U.S. Naval Hospital, Bethesda, Maryland, on December 5, 1962 with a history of intermittent nausea and vomiting, abdominal discomfort, and occasional tarry stools over a period of 8 months. At another hospital in May 1962 he had had a gastrointestinal X-ray examination and was told that he had "loose ligaments" of the stomach. He was placed on an ulcer regimen, with some success. About 2 to 3 weeks before admission he once again experienced abdominal discomfort as well as exertional dyspnea, dizziness and fatigue. He had no hematemesis. At a local dispensary his hemoglobin was found to be 6.6 Gm., and his stool was strongly positive for blood.

Physical examination revealed a pale man with mild epigastric tenderness on palpation but no other significant findings. Laboratory findings included a normal urinalysis, a hemoglobin of 7.0 Gm., and a hematocrit of 23, a low blood volume, bromsulfalein test showing no retention, and a normal serum bilirubin. Blood was not found in the gastric aspirate; achlorhydria was present even with histamine stimulation. An ulcer regimen was begun and he was given a transfusion of 5 units (2,500 c.c.) of whole blood.

A gastrointestinal X-ray examination showed evidence of gastroduodenal intussusception. The following day, after X-ray examination showed the picture to be unchanged, an operation was performed.

After the abdomen was opened by a midline incision the stomach was found to be folded upon itself in several areas. The gastric wall was flaccid and of good color. The duodenum was grossly dilated, and down to the level of the junction of descending and transverse portions was filled with a soft-tissue mass. By taxis the intussuscepted stomach was gently squeezed back through the pylorus into its normal position. There was great irritability of the distal stomach and proximal duodenum, with gross peristaltic waves which appeared to be attempting recreation of the intussusception. The gastrocolic omentum was opened and the stomach thoroughly palpated. A soft mass could be felt originating in the posterior gastric wall near the greater curvature at the junction of the body and fundus. A generous anterior gastrotomy in the body of the stomach revealed that the mass was submucosal in origin and that its overlying gastric mucosa was flattened and centrally abraded. Elsewhere the stomach was normal. The duodenum was easily turned inside out through the patulous and dilated pylorus which readily admitted 3 fingers. In the attempt to demonstrate the mechanism of the intussusception it was found that the tumor mass could easily be drawn back into the pylorus. Initially an attempt was made to remove the tumor by incising the mucosa and dissecting the mass but too many large blood vessels were encountered which continued as pencil-sized structures into the gastrosplenic ligament. This suggested that the tumor might be some form of hemangioma, and therefore a generous wedge of the stomach was resected, adequately encompassing the tumor. The greater curvature was reconstituted and the posterior and anterior gastric walls repaired.

The pathologist described the tumor as a hemangiolipoma composed of mature fat and numerous large, vascular channels.

The patient tolerated the surgical procedure well and made a swift recovery. His anemia was corrected. He remained achlorhydric. His postoperative X-ray gastrointestinal examination was normal.

(*Continued on page 348*)

Tuberous Sclerosis

Part I. Tuberous Sclerosis Associated with Bilateral Renal Hamartomas

Report of a Case

LIEUTENANT EDWARD C. GILBERT, MC, USN[*], LT. COMMANDER MITCHELL EDSON, MC, USN[†],
AND LIEUTENANT WILLIAM P. URSCHEL, MC, USN[‡]

In an excellent review of the subject Golji[1] cogently described the protean manifestations of the disease entity called tuberous sclerosis. In addition to the classic triad of idiocy, epilepsy and adenoma sebaceum, Ross and Dickerson[2, 3] focused attention upon the frequent presence of renal hamartomas found in conjunction with this disease. Their statistics revealed the presence of these tumors in 8 of 9 reported autopsy studies. Furthermore, in a series of 47, 22 per cent showed pyelographic abnormalities consistent with tumor formation. The following case report is submitted because of the dramatic urologic complications and the presence of a definitive pathologic confirmation of renal angiomyolipoma.

Report of Case

J.L., a 34-year-old Caucasian woman, has been followed at Bethesda Naval Hospital since 1956 when, at the age of 25, an abdominal mass was discovered during a routine physical examination. Intravenous and retrograde pyelograms were performed revealing marked distortion of the calyceal patterns bilaterally (figure 1). A bone survey revealed numerous sclerotic lesions of the pelvis, spine, femora, skull and hands, the nature of which was not apparent. She was ultimately explored transabdominally, and 2 large masses were found protruding from the inferior pole of the left kidney, with a similar mass protruding from the inferior pole of the right kidney. Further exploration revealed a small nodule on the dome of the liver approximately 1 cm. in diameter. Both kidneys were found to be fixed to the retroperitoneum. It was elected to perform a biopsy and terminate the operation. Ultimate pathologic confirmation revealed angi-

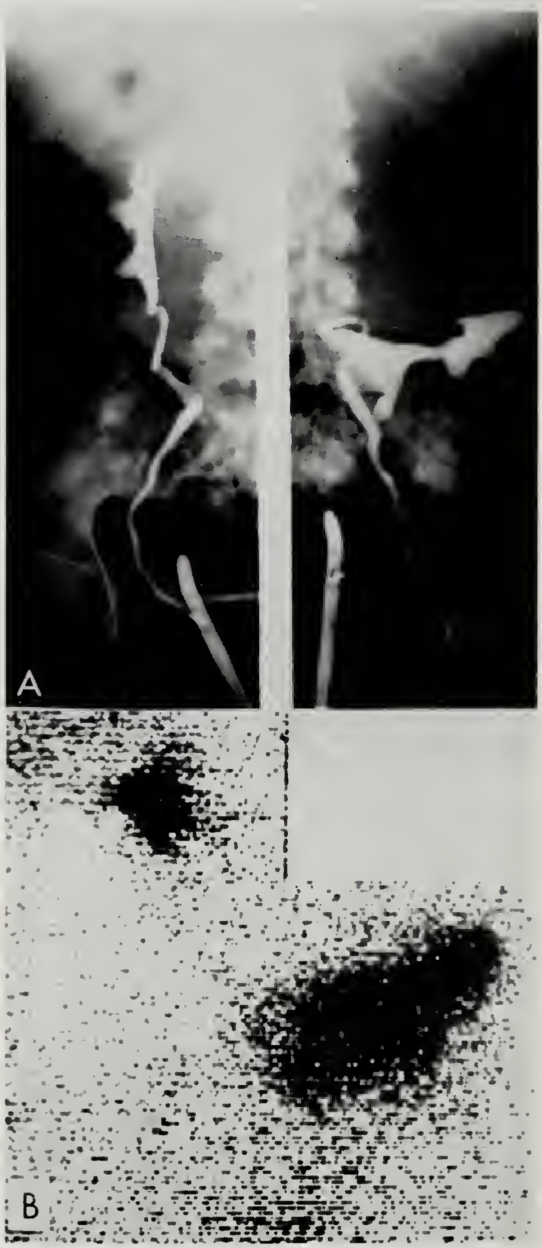


FIG. 1. (A) Bilateral distortion of internal collecting systems; (B) renal scan corresponding to altered polarity and distortion demonstrated by retrograde pyelograms (1965).

---

[*] Resident, Urology Service, United States Naval Hospital, National Naval Medical Center, Bethesda, Md. 20014

[†] Staff, Urology Service, United States Naval Hospital, National Naval Medical Center.

[‡] Former resident, Urology Service, United States Naval Hospital, National Naval Medical Center; presently on the staff of the Urology Service, United States Naval Hospital, Newport, R. I.

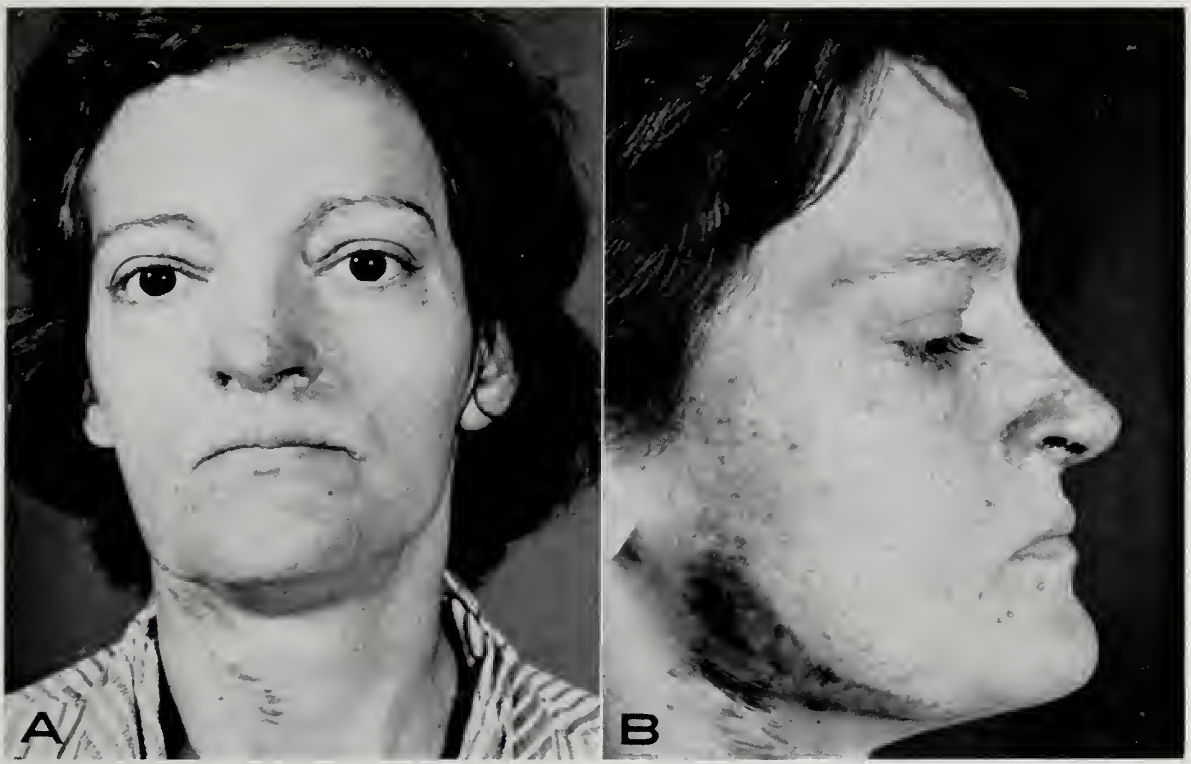


FIG. 2. (A) Lesions consistent with adenoma sebaceum; (B) butterfly configuration.

omatoid hamartoma, and a diagnosis of tuberous sclerosis was established. The postoperative course was benign. When the patient was fully recovered a skin biopsy of the face was consistent with adenoma sebaceum. A biopsy of the thickened sclerotic cortex of the left femur was also performed, but the lesion was reported as pathologically nonspecific. An electroencephalogram failed to reveal any abnormality of the central nervous system.

Over the next 5 years the patient experienced several bleeding episodes of significant magnitude. In 1961 she was hospitalized in a state of hemorrhagic shock after having passed massive amounts of blood per urethra. At the time of her admission the blood pressure was unobtainable and both kidneys were palpable transabdominally. She was treated with dextran and vasopressors, and her condition stabilized over the course of a week, during which time she received a total of 6 units of whole blood. While still hospitalized she experienced an additional bleeding episode necessitating 10 additional units. Bleeding and clotting studies were performed and were found to be normal. Hypertension was first noted at this time and was controlled with therapeutic doses of chlorothiazide and Apresoline.® Renal function remained within the limits of normal as measured by blood urea nitrogen, creatinine, phenolsulfonphthalein excretion, and creatinine clearance.

By July 1965 the patient had been hospitalized a total of 14 times for the treatment of severe hemorrhage and had received a total of 48 units of whole blood. Her renal function remained normal despite an intermittent Proteus infection responding over 4 years to a variety of antiseptics and attempts at urinary acidification. A complete dermatologic evaluation confirmed the presence of adenoma sebaceum (figure 2), subungual fibromata (figure 3), a shagreen patch over the left lumbar area, café au lait spots, and a port wine angioma in the left lumbar region. She demonstrated the entire cutaneous spectrum of

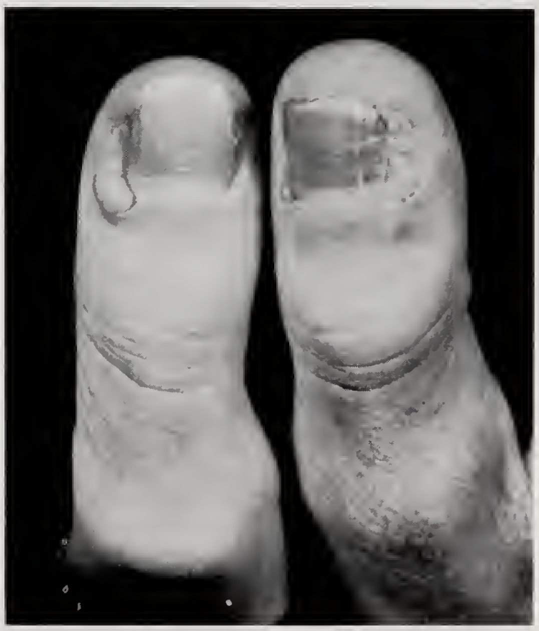


FIG. 3. Typical subungual fibromata.

her affliction but appeared to have no central nervous system involvement.

Discussion

This case is considered worthy of description by virtue of the remarkable and unrelenting hemorrhage which presented a precarious problem in management since the incipient stages of recognition of her disease. It becomes apparent that neurocutaneous manifestations of tuberous sclerosis can be supplemented, if not exceeded, in magnitude by factors emanating from mesenchymal elements. The "forme fruste" variety of this syndrome has been described. In the case of our patient central nervous system involvement has never been demonstrated. The salient complications secondary to the hamartomatous growths of the kidneys is a departure from the common course of this disease and, in this respect, is worthy of note.

References

1. Golji, H.: Tuberous sclerosis and renal neoplasms. J. Urol., 1961, **85,** 919.
2. Ross, A. T., and Dickerson, W. W.: Tuberous sclerosis. Arch. Neurol. & Psychiat., 1943, **50,** 233.
3. Dickerson, W. W.: Characteristic roentgenographic changes associated with tuberous sclerosis. Ibid., 1945, **53,** 199.

Part II. Skeletal Changes in Tuberous Sclerosis

COMMANDER H. R. NOER, MC, USN*, AND LT. COMMANDER S. D. HARMON, MC, USN†

Tuberous sclerosis is classically considered as a neurologic syndrome, but its manifestations are often evident in other organ systems. Sebaceous adenomata, "fibromata" of the nail beds, skin and subcutaneous tissue, and sclerotic or cystic lesions are often found in the kidney, liver, lung or retina. Similar patchy lesions are encountered not infrequently in the calvarium, but other skeletal lesions have been reported only rarely.

Bony changes were detailed by both Whitaker[1] and Hawkins.[2] They may be summarized as follows:

Skull: patchy areas of increased bone density, often with generalized thickening of the tables (figure 4).

Hands and feet: undulating subperiosteal thickening of the metacarpals and metatarsals not unlike that seen in melorheostosis, often with "cystic" changes and with cortical pitting of the phalanges (figure 5).

Long bones: cystic or fibrocystic changes, irregular cortical thickening, and coarsened trabecular patterns with small periosteal nodules (figure 6).

Spine and pelvis: patchy areas of increased bone density (figure 7). Hawkins[2] considered the combination of the changes in the calvarium, hands and feet to be of diagnostic significance.

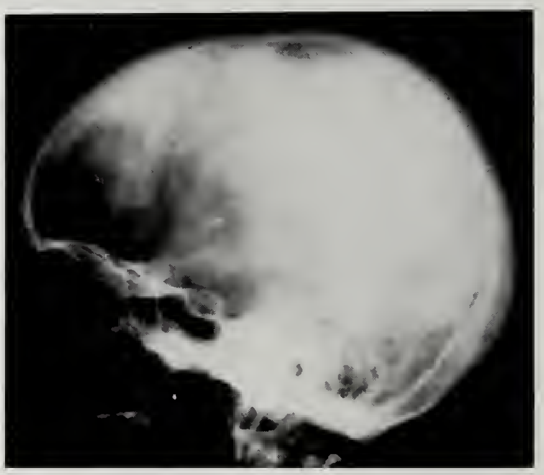


FIG. 4. X-ray of calvarium. Note thickening of the diploë, with patchy sclerotic densities and marked sclerosis of the base of the skull.

This patient never offered any orthopedic complaint. When seen by orthopedic surgeons the reason has invariably been that the striking vertebral changes observed in pyelograms have caused referral to the Orthopedic Service. One of us (H. R. N.) has followed this woman for 7 years without observing any change in the radiogram except for a definite increase in thickness of the tables of the skull. Since the bony changes spare the joints and do not weaken the bones no symptoms can be anticipated.

This part is presented because only 2 refer-

---

* Orthopedic Pathology Section, Armed Forces Institute of Pathology, Washington, D. C. 20012.

† Department of Orthopedic Surgery, United States Naval Hospital, National Naval Medical Center, Bethesda, Md. 20014.

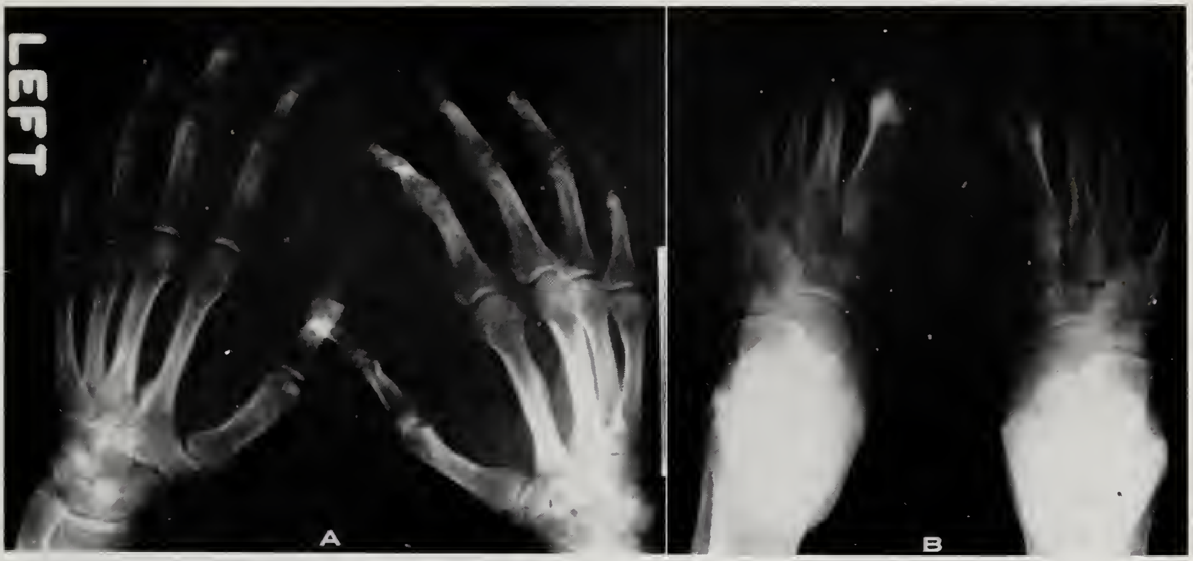


FIG. 5. X-rays of metacarpals (A) and metatarsals (B) reveal the undulating, periosteal thickening characteristics of the rare bone changes in tuberous sclerosis.

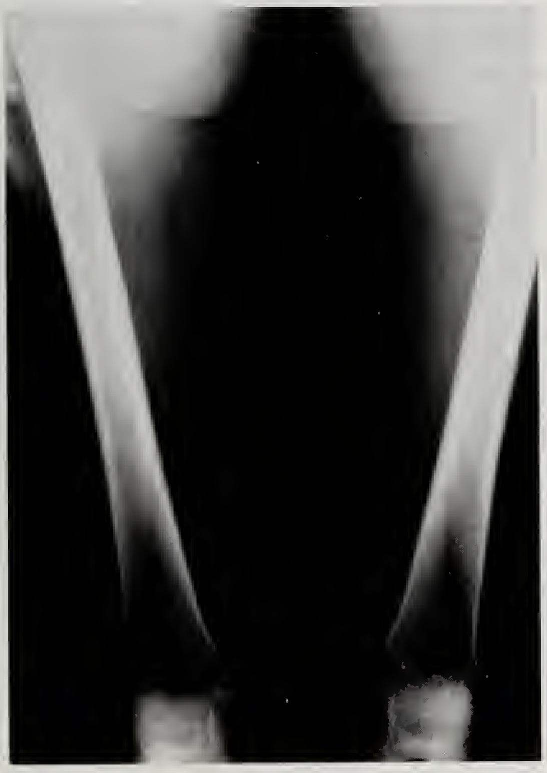


FIG. 6. X-rays of femora, demonstrating the patchy sclerotic densities along outer cortex.

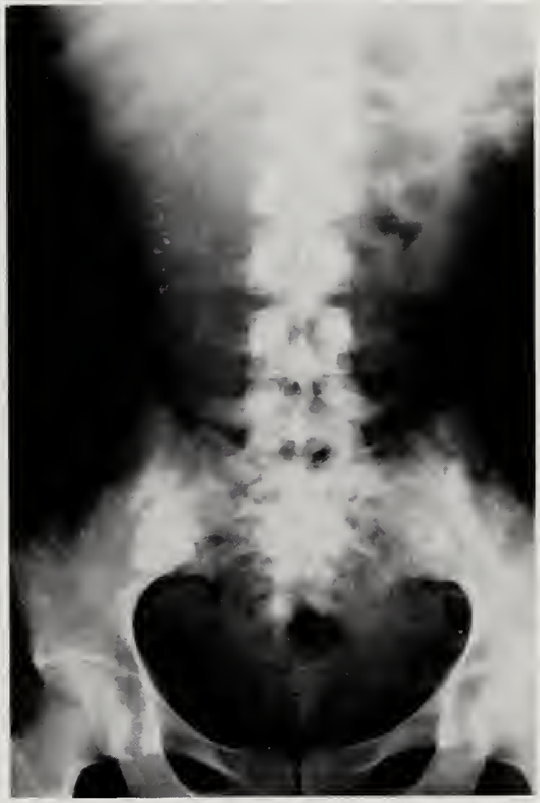


FIG. 7. X-rays of lumbar spine and pelvis. Note patchy, sclerotic densities throughout the bodies and pedicles of the vertebrae and pelvis. Films taken in 1958 (not reproduced here) revealed an almost identical picture. The symmetry is striking.

ences in the literature to the generalized bony changes observable in tuberous sclerosis have been noted.

Summary

The radiographic skeletal changes in a case of tuberous sclerosis have been presented. The findings are identical with other reported cases,[3] except for this patient's normal mentality and the absence of central nervous system abnormality. Over the course of 7 years no change in the bony anomalies has been observed beyond an increase in the calvarial thickening.

(*Continued on page 350*)

Therapy of a Neurotic Symptom by "Desensitization"

Report of a Case

LT. COMMANDER JAMES J. CAVANAGH, MC, USN*

Psychotherapy of a neurotic person typically consists of attempts to assist the patient in gaining insight into presumed causes of his neurosis and encouraging utilization of this insight in various ways in order to effect the necessary constructive changes.

This clinical note is a report of the apparently successful treatment of a specific neurotic symptom seemingly achieved by a specific technique directed toward the symptom itself with no effort being made by therapist or patient to understand "causes." The treatment of the symptom was based on the assumption that in the instance the presenting symptom was, in fact, the disease and that its removal would cure the patient.

The symptom in this case consisted of severe anxiety with tremor and loss of control of the bow hand when the patient, a professional cellist (and former member of a service band), attempted to play "open" passages of Mozart (i.e., places in which precision was demanded). The symptom was present whether or not the patient was a member of a group of cellists or was alone. This symptom had been present for 25 years and was increasing in severity. The patient was dejected, feeling that the continuation of this phobic response meant the termination of his career as a professional cellist. Perhaps as distressing to him was the rather severe degree of anxious anticipation that assailed him for days prior to a concert requiring the playing of the "open" music. I had no previous experience with the therapeutic techniques about to be described.

The method of symptomatic treatment used is called psychotherapy by reciprocal inhibition (Wolpe[1]). It is essentially a "desensitization" procedure. Patient and doctor work out a hierarchy of scenes to be visualized by the patient, ranging from scenes least likely to produce the patient's specific anxiety to scenes most likely to do so. The patient is instructed in methods of achieving muscular relaxation (a state of relaxation being considered antithetical to anxiety). He is then asked to visualize the scene lowest in the hierarchy (i.e., the least anxiety-provoking scene) while deeply relaxed. If at any time a visualization provokes anxiety, a lesser item in the hierarchy deemed not to produce anxiety is immediately presented. Several scenes are presented in each session. The object is to make it possible for the patient to gradually visualize scenes with more and more anxiety-producing potential (in the real life situation) along the continuum of the relevant theme without experiencing anxiety. When the patient is able to imagine the ultimately provocative scene without anxiety he is assumed to be relieved of his symptom and, in fact, carry-over to the real life situation outside the office is said to be invariably effected under those favorable circumstances.

Eight weekly sessions of about ½ hour each were necessary to complete treatment of this patient. There was gradual reduction of anxiety to the relevant "real life" situation as the treatment progressed. At the final session the patient was able to visualize playing "open" passages of Mozart without difficulty. Understandably, his feelings of grave concern about the consequences of his symptom and his associated dejection disappeared. A follow-up of 3 weeks revealed neither recurrence nor the development of "replacement" symptoms. The patient reported playing chamber music without anxiety, either in anticipation or during actual performance. He was discharged from treatment and asked to contact the psychiatrist by telephone in 6 months for a follow-up.

This case report suggests that some symptoms

(Continued on page 350)

---

* Formerly a staff member of the Neuropsychiatric Service, United States Naval Hospital, National Naval Medical Center, Bethesda, Md.; presently a staff member at the United States Naval Dispensary, Washington, D. C. 20360.

PRESIDENT'S PAGE

RELATIVE VALUE SCALE

At a special meeting of the members of the Medical Society of the District of Columbia at our headquarters on Sunday, April 24, several significant decisions were made by an overwhelming majority of the more than 300 members who were present. In the first place, the membership reaffirmed its intent to adopt a Relative Value Scale. However, the scale as submitted to the membership was rejected.

It became evident after much free discussion that the general surgeons, the surgical specialists, and the anesthesiologists were so dissatisfied with the proposed scale that further deliberation of the Relative Value Scale Committee in consultation with representatives of the aforementioned groups was needed. These meetings are now in progress, and it is hopefully expected that agreement of all parties will be reached in the next few weeks. It is further hoped that the amended Relative Value Scale will be an expression of a broad and representative segment of the respective groups. If so, its adoption at another special meeting of the membership at an early date will be assured.

Finally, the membership owes a large debt of gratitude to the members of the Relative Value Scale Committee, chaired by Dr. Frank Bacon, for their untiring efforts, understanding, and fair attitudes.

Robert J Coffey

Pro-Banthīne®
(propantheline bromide)

Intragastric photography has provided a new and precise method of measuring the effectiveness of anticholinergic drugs. The transition from gastric motor activity to relaxation seen with effective doses of such drugs takes only a few seconds and is easily demonstrated.

The importance of vagal stimulation of gastric hyperacidity and hypermotility makes such measurements particularly important in evaluating the parasympatholytic effect of drugs used in patients with peptic ulcer, gastritis, biliary dyskinesia and other gastrointestinal disorders.

Pro-Banthīne has been shown[1] to produce complete gastric motor inactivity with doses of 6 to 8 mg. intravenously. Comparison tests were made with the belladonna fraction, atropine. Measured usual dosage unit versus usual dosage unit, Pro-Banthīne was more than four times as effective as the belladonna alkaloid.

Indications: Peptic ulcer, functional hypermotility, irritable colon, pylorospasm and biliary dyskinesia.

Oral Dosage: Adequate dosage should be given for optimal results. For most *adult* patients this will be four to six 15-mg. tablets daily in divided doses. In severe conditions as many as two tablets four to six times daily may be required. Pro-Banthīne (brand of propantheline bromide) is supplied as tablets of 15 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type ampuls of 30 mg.

Side Effects and Contraindications: Urinary hesitancy, xerostomia, mydriasis and, theoretically, a curare-like action may occur. Pro-Banthīne is contraindicated in patients with glaucoma, severe cardiac disease and prostatic hypertrophy.

See for

[1] Barowsky, H.; Greene, L., and Paulo, D.: Cinegastroscopic Observations on the Effect of Anticholinergic and Related Drugs on Gastric and Pyloric Motor Activity, Amer. J. Dig. Dis. *10*:506-513 (June) 1965.

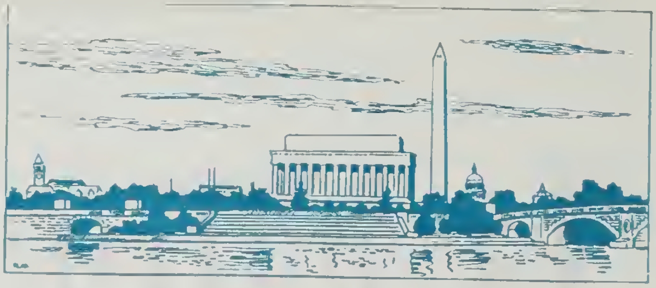
Is Effective

yourself

Complete gastric relaxation with Pro-Banthīne. As this intragastric photograph demonstrates, gastric relaxation is attained with 6 mg. of Pro-Banthīne intravenously; the antrum is relaxed and the pyloric orifice remains open. Full intravenous doses of atropine (4 mg.) produce no measurable effect.

SEARLE

Research in the Service of Medicine



EDITORIALS

Glaucoma Screening Clinics

GLAUCOMA SCREENING CLINICS provide a useful, inexpensive method for detecting glaucoma in large indigent populations. However, the public in general and physicians in particular should be aware of the limitations of these clinics not only in the few cases of glaucoma that are inevitably missed, but in the cases of all other eye diseases which are wholly overlooked.

To take these areas one at a time, screening clinics define an abnormal intraocular pressure as greater than 21 mm. Hg as determined with the Schiotz tonometer. Unfortunately, about half of patients with glaucoma will diurnally fluctuate in pressure sufficiently to come under 21, and repeated testing of borderline cases enlarges this false-negative group. The mechanical design of the Schiotz tonometer also carries with it a small error, so that all told somewhat more than 50 per cent of cases of glaucoma will be passed as normal in a screening program. Also, since these clinics accept only patients over 40 years of age, all younger cases are missed. Glaucoma occurs in all age-groups, though the incidence is directly related to age. Modern ophthalmology insists that all patients old enough to hold still have a glaucoma test. Practically speaking, this is down to age 5–10 years. Particular emphasis should be placed on those with a family history of the disease.

The importance of a complete ophthalmologic examination lies not only in glaucoma detection, where cupping of the optic nerve head and field loss may serve to detect the disease if a random pressure measurement is normal, but also in other problems peculiar to the eyes. The ocular mechanism is subject to a number of sensory and motor disorders of which the patient may be wholly unaware. There is a wide range of congenital, inflammatory, degenerative and neoplastic conditions, and refractive errors, such as myopia in children, which might cause considerable damage physically and/or psychologically if allowed to proceed uncorrected. One of the most important of these is suppression amblyopia, which in effect deprives 1 to 2 per cent of the population of adequate vision in one eye, with consequent loss of fusion and depth perception. Moreover, a person with this abnormality may be rendered almost blind should something happen to his good eye. Modern pleoptics has introduced new methods of treating this condition in children and even in adults.

In summary, glaucoma screening clinics should be reserved for large indigent populations where they provide the only mechanism for detection of this serious disease. However, the public and physicians should understand that this service in no way suffices to detect all glaucoma, or any other important eye disorder.

KENNETH A. SIMON, M.D.

Contact Lenses and Unconscious Patients

ABOUT 5 MILLION AMERICANS are now wearing contact lenses. If a contact lens is allowed to remain on the cornea of an unconscious patient, considerable harm can be done. Even with the lids closed, circulation of tears beneath the lens stops and the corneal epithelium becomes devitalized and serious sequelae may follow.

Every unconscious patient should be checked

Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of the Medical Society of the District of Columbia

to see if he is wearing contact lenses. It is not necessary to remove them completely; they can simply be pushed off from the cornea into the cul-de-sacs.

The method is as follows: Two fingers, usually the thumb and forefinger, are used to apply pressure to the outside of the eyelids and the lens moved into the upper or lower cul-de-sac. In this position the cornea will not be damaged and the lens can safely remain there for at least 24 hours.

Dan G. Albert, M.D.
Chairman, Section on Ophthalmology

Dispensing the Sample*

The samples you get from drug companies are intended for one purpose: to be given to patients as a trial. However, if no written prescription accompanies the sample, the transaction looks like the dispensing of a home remedy; or looks as if the patient is being used as a guinea pig. Common sense suggests that the sample should be accompanied by a written prescription for the same item.

It might be best to tell the patient: "This is a sample of a new (or a good old) medicine that has had some fine results. If it does for you what I hope it will and without any ill effects, take the prescription to your neighborhood drug store so you can get more of it. If you are disappointed in the results, call me."

This simple procedure will prevent the embarrassment of an otherwise satisfied patient trying to get the drug without a prescription. It will lift the medication into the dignified "prescription" class rather than make it look like a casual free sample. It indicates that the doctor is not going "out on a limb," calling it a wonder drug. And it acts as an automatic (if not entirely scientific) check on the effectiveness and safety of a new drug.

---

*Reprinted from J. Med. Soc. New Jersey, 1965, 62, 547.

If the Shoe Fits . . .

"It is to be lamented that, at least in our country, there is often a lack of harmony and good feeling in the ranks of those whose interests can only be subserved by an intelligent administration and a high standard of excellence in all that concerns the welfare and success of our hospital government; and this friction is generally most pronounced, as it is most frequent, between the medical staff, individually or as a whole, and the governing body, however it may be constituted; and it inevitably leads to a condition of things which has often retarded the growth and limited the sphere of usefulness of many an institution whose promise was as bright as charity could wish or science expect.

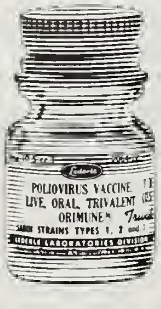
"Perhaps it is not always easy to place the responsibility for such misunderstanding, but it seems to be due in the great majority of cases to a misconception of the bounds and limits of the respective fields of duty and management of the two responsible bodies. I should say that encroachments are too often made upon strict professional domain and that its rights, at times, are ruthlessly infringed upon and its dignity and self-respect assailed, without any justification or reasonable excuse for the action. . . ."

To the Editor:

The foregoing is taken out of a speech delivered by J. Ford Thompson, M.D., Professor of Surgery at the George Washington University School of Medicine; the title of the address was "History of the Hospitals" and was delivered at the Seventy-Fifth Anniversary observance of the Medical Society of the District of Columbia on February 16, 1894. The meeting was held in the National Rifles Armory, on 916 G Street, N.W.; President Cleveland and many other dignitaries were among the invited guests.

H. P. R.

Doctor...two important Lederle products for routine office procedures

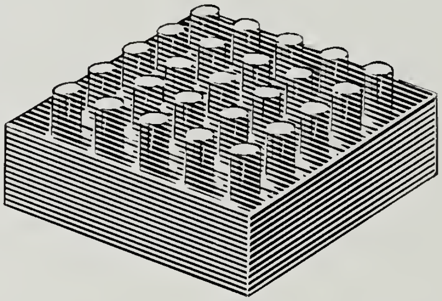


single-dose vials for convenient and economical polio immunization

ORIMUNE®
POLIOVIRUS VACCINE, LIVE, ORAL
TRIVALENT
SABIN STRAINS, TYPES 1, 2 and 3

Fast, simple administration—and economy for the patient — make the new 0.5 cc single-dose vial of ORIMUNE Trivalent ideal for private practice. (Packaged 5 to a box with 5 sterilized disposable droppers for your convenience).
(Also available in 2 cc and 2 drop dosage forms).
Only 2 doses required for complete, initial immunization for patients more than a year old.

Effectiveness—may be expected to confer active immunity against all three types of poliovirus infection in at least ninety percent of susceptibles only if given at full dosage, as directed. No characteristic side effects have been reported. There are, however, certain contraindications. These are, broadly: acute illness, conditions which may adversely affect immune response, and advanced debilitated states. In these, vaccination should be postponed until after recovery.
In infants vaccination should not be commenced before the sixth week of life. Do not give to patients with viral disease, or if there is persistent diarrhea or vomiting. ORIMUNE and live virus measles vaccine should be given separately.
Dosage—initial immunization: two doses each given orally at least 8 weeks apart. (Give a third dose to infants at 10-12 months). Booster immunization: one dose, given orally. See package literature for full directions.



simplifies routine screening

TUBERCULIN, TINE TEST
(Rosenthal) Lederle

Swab • Uncap • Press • Discard

Comparable in accuracy and reliability to older standard intradermal tests*, but faster and easier to use. Since TINE TEST is relatively painless it should receive greater patient acceptance. Results are read at 48-72 hours. The self-contained, completely disposable unit requires no refrigeration and is stable for two years.
Side effects are possible but rare: vesiculation, ulceration or necrosis at test site. Contraindications, none; but use with caution in active tuberculosis. Available in boxes of 5 (new individually-capped unit); cartons of 25.
*Rosenthal, S. R., Nikurs, L., Yordy, E., and Williams, W.: Scientific Exhibit Presented at the Annual Meeting of the National Tuberculosis Association, Chicago, Illinois, May 30-June 2, 1965.

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York
605-6-3390

makes sleep irresistible

nidar®

EACH TABLET CONTAINS:

Pentobarbital Sodium	25 mg.
Secobarbital Sodium	25 mg.
Butabarbital Sodium	7.5 mg.
Phenobarbital	7.5 mg.

(WARNING: MAY BE HABIT FORMING)

ARMOUR PHARMACEUTICAL COMPANY
Chicago, Illinois, U.S.A.

nidar®

Sleep comes easy...lingers...departs naturally

Gentle doses of 4 barbiturates assure uninterrupted sleep

2 barbiturates act fast...in 20 to 30 minutes

2 long-range barbiturates come into play
to sustain sleep for up to 8 hours

Tiny amounts of individual barbiturates
means Nidar is well tolerated

Patients enjoy a refreshing, clear-headed wake-up

makes sleep irresistible

IN BRIEF:

EACH TABLET CONTAINS:

Pentobarbital Sodium	25 mg.
Secobarbital Sodium	25 mg.
Butabarbital Sodium	7.5 mg.
Phenobarbital	7.5 mg.

(WARNING: MAY BE HABIT FORMING)

Dosage: One or two tablets, one-half hour before bedtime.

Indications: For night-time sedation and refreshing sleep up to eight hours.
Contraindications: Patients sensitive to barbiturates. Use with caution in the presence of moderate to severe hepatic disease.
Supplied: Bottles of 100 tablets.
CAUTION: Federal law prohibits dispensing without a prescription.

ARMOUR PHARMACEUTICAL COMPANY
Chicago, Illinois, U.S.A.

The First National Congress on Medical Ethics

The First National Congress on Medical Ethics, sponsored by the Judicial Council of the American Medical Association, met in Chicago, March 5–6, 1966. The meeting consisted of a broad discussion of medical ethics, our current problems, and how we may best resolve them.

Professor Everett Hughes, Chairman of the Department of Sociology of Brandeis University, speaking on "Professional Ethics in a Time of Change," stated that principles and working rules are different. Working rules must be changed and altered as circumstances, times, and changes in technology develop, but the principles behind the basic rules are unaltered by primary events and they only change in response to the working rules.

There is a tendency for all professional people to feel that no one else can fully understand their specific problems and are therefore not capable of criticizing those problems. This holds true not simply in medicine but in all professions. In the era bygone, medicine used to compete with the ancillary medical services, and doctors, midwives, pharmacists, and practitioners of all forms were virtually in direct competition. In recent times medicine has elevated itself to a status far above the ancillary professions, which, in truth, work under the supervision of medicine.

Another change is that the physician now seldom works alone. The team concept of medicine has become much more prevalent. More and more, physicians work together for the benefit of the individual patient, with delegation of special duties to house staff, nurses, laboratory technicians, and others. Dr. Hughes thinks it will become necessary to make other members of the team more complete partners in the profession of medicine. He thinks the day is over when ethical problems can be decided by doctors alone, and he suggests that the best means of maintaining control of medicine is to draw others into the partnership and seek joint answers to our mutual problems.

Dr. James Z. Appel, President of the American Medical Association, addressed the assembled group on the subject, "Medicine—a Business or a Profession?" He referred to medical incompetence as a real problem which must be met squarely. The potential danger is disproportionate to the number of physicians involved. A few incompetent physicians can pose tremendous problems for the whole medical profession. Only 8 out of 47 State organizations have provisions in their charters for dealing with incompetence. He believes that the hospitals have a responsibility to maintain a level of competence and that, whenever possible, the local hospital staff is the logical body to control the incompetent physician. If the hospital staff cannot deal with the problem, the next step would be to present the matter to the local Grievance Committee, then to the State Society, and, if necessary, to the State Board of Medical Examiners. He thinks that the national or State organizations should supervene and initiate disciplinary therapy only if the County Medical Society does not act.

The man most dangerous is the one who is not a member of the Medical Society and not on the staff of the local hospitals. Here, the County Medical Society has no jurisdiction and States must deal with incompetence at this level. He thought that more "teeth" were needed in our disciplinary laws and that a spurt of professionalism is vitally needed to emphasize and reëmphasize our professional standards. We will remain independent only by emphasizing our professional conduct and deeds and by deëmphasizing finances. The biggest difference between medicine and all other professions is the attitude toward finances; people react vindictively when they think that their doctor places finances above all else.

Dr. Russell B. Ross, Chairman of the AMA Council on Medical Service, stated that the physicain is only unethical when his course of action is contrary to the interests of the patient, the community, or other physicians. Dr. Tennery, in a subsequent discussion on medical etiquette, elaborated on this point and stated that his 3 yardsticks for measuring ethical conduct were: (1) intent, whether of the patient, the physician, or other physicians, (2) local customs and laws, and (3) the Golden Rule. He again emphasized that the principles or ethics do not change, simply their application.

Dr. Newman, the Committee Chairman on Osteopathy and Medicine, stated that 39 states currently give unlimited licenses to osteopaths. In many states the osteopaths are subject to the same examining boards as physicians and seem to do as well on many of the State Boards, for example, in Ohio, Kentucky, and elsewhere.

He pronounced the osteopath-physician merger in California a success. The California College of Osteopathy is now the California College of Medicine and part of the University of California teaching system, and its graduates receive M.D. degrees. He believes our attitude should be to appraise osteopathy in the light of its recent advances and that the policy to join or not with the osteopaths should be initiated at State levels. If we continue to consider the osteopaths as cultists, then such association would be considered unethical, but if the osteopaths are attaining the level of scientists they should be treated as such.

Toward the conclusion of the meeting there was a brief summary of the majority opinions on problems presented in the various workshops. From the Grievance Committee Workshop it was the consensus that most of the complaints reaching Grievance Committees have financial matters as their source. Most of the societies separate fee problems, and some have different committees to handle these types of problems.

There was general agreement that most problems arise through difficulty in communication and can be settled informally. Most societies do not deal with problems referred to the Grievance Committee if legal action has been started or is very likely to be started.

The records of the Grievance Committee are handled differently in different States. Some States keep no records other than the written correspondence to and from the committee. Other States keep complete records and even take recordings of all discussions. Almost all societies believe that publicizing, without names, some of the details of complaints referred to the Ethics and Grievance Committees is highly desirable. Notifying laymen, via the newspapers, radio or television, that the society has a Grievance Committee does not necessarily increase the volume of work of the committee or increase the number of complaints to the committee; on the contrary, it gives the lay public a greater sense of rapport and feeling of confidence in the medical profession as a whole.

In some states the Medical Society deals with doctors even though they are not members of the Society, but most Societies deal only with their own members. Some thought that it was not the function of a Society to act in a punitive way but to leave this strictly to the State Board of Licensure. Most Societies agreed liability insurance should be secured for members of the Grievance Committee so that they would be protected in the event of suit against them.

The Board of Censors and the Disciplinary Committee, in a joint panel discussion, agreed that rules of discipline should be established. There should be close liaison between the State Board of Medical Examiners and the State Medical Societies, but the State Medical Society should keep out of all cases involving criminal action until the time of conviction. All investigative sessions should be kept informal and preferably without counsel at the investigative level, but before disciplinary action is initiated the physician should be informed of his rights and privileges and should be represented by counsel. No punishment should be in any way undertaken until all appeals are exhausted, and adequate stenographic records of all disciplinary meetings should be kept for use in subsequent appeals.

LEWIS H. BIBEN, M.D.
Member, Committee on Medical Ethics and Professional Conduct

Georgetown Affiliates with Providence Hospital in Educational Program

GEORGETOWN UNIVERSITY School of Medicine announces an affiliation with Providence Hospital, Washington, D. C., as part of the School's program in continuing postgraduate education for physicians of the community. This joint program is under the supervision of Dr. Bruce I. Shnider, Associate Dean of the School of Medicine, and Dr. Thomas Curtin, Medical Director for Staff Education at Providence Hospital. The program will begin in September, 1966.

Since 1952 Georgetown has been engaged in an extensive program of postgraduate education for physicians in community hospitals located in Buffalo and Rochester, New York, and Worcester, Mass. Through these affiliations, after which the Providence affiliation is patterned, the faculty of the School of Medicine, at regular intervals during the year, provides lectures, seminars, and conferences on recent advances in all fields of medicine. Through such affiliations, busy practicing physicians associated with community hospitals can keep abreast of the rapid changes occurring in medicine.

Georgetown's program at St. Mary's Hospital in Rochester, New York has worked so effectively that that hospital is now being incorporated into the regular undergraduate and house staff teaching programs of the University of Rochester.

Observations on AMA Air Pollution Medical Research Conference*

Many fine papers reporting much research on effects of low levels of various pollutants over a short period of time were presented. In general they did not show much effect on any of the less highly organized body systems being monitored. Conspicuous by its absence was little mention of effects on finer sensory or neurological systems such as Pavlovian reflexes or dim light vision.

Since the total body impact of air pollution is on many body systems, the effect on any of the less highly organized systems being measured need not be large, even for a rather severe total body impact. If, in order to set up an experiment that can be more carefully controlled only a single pollutant is used, and that for fairly brief exposures, then only a tiny part of the physiological problem may be what is being looked at. By avoiding the more refined tests and dismissing the observations of patients and clinicians as "not scientific," the total large problem can be broken up into many tiny problems, each of which may seem inconsequential to the research scientist.

Many persons, both professional and lay, have experienced exposures to toxic gases which left them feeling as if their health had been shattered, and yet a battery of tests either too general or too superficial would lead a test-bound physician to comment, "I can find nothing wrong with you." Fortunately, the more sensitive physicians usually escape this trap.

There were several wholesome contrasts to the fractionated approach. There were frequent mention and acceptance of the term "hyper-reactor," which indicated a good recognition of individual variation. Dr. Frederick Sargent's ecological approach, presented at the luncheon on the first day, was highly significant. He helped restore a position of dignity to a common-sense, total view of the interaction of man and his environment.

Dr. Francis M. Pottenger, Jr.'s discussion of the role a county medical association can play was outstanding. In a review of the activities of his own Association (Los Angeles) he gave the history of its activities, which indicated that it had given a clear mandate for more action on smog than had been taken since 1950. He noted that destruction of the electrified mass transportation system and some large fuel burning plant construction was carried out despite medical misgivings. Dr. Pottenger was very clear in pointing out the need for an interdisciplinary approach that would include engineering, social, economic and political factors. He hinted at, but did not spell out, how political and administrative bodies had misrepresented the position of the local medical community by proclaiming to the public that physicians would not say that smog was injurious to health. Both the Board of Supervisors and the Los Angeles Air Pollution Control District have at times been party to misquotation and misrepresentation of their scientific and medical advisors. Such actions have served to give industry undue freedom of action and have unjustly damaged the public image of the medical profession in the Los Angeles area. Since these actions appear to incorporate a combination of 2 or more persons united in an effort to deceive, they may be conspiratorial and hence illegal and actionable.

In fairness to the Control District and the Board of Supervisors, it should be noted that they appear to have swallowed a fashion current in some medical circles of exaggerating the importance of medical tests in chronic poisoning while minimizing the opinions of the better clinicians.

The California State Board of Health has appeared to have played a more realistic role than have political and administrative people in the Los Angeles City government. Dr. Goldsmith and Dr. Breslow, who both spoke at the meeting, have been outstanding in presenting a proper medical point of view, despite efforts of business and their political spokesmen to suppress this.

The meeting was neither completely open nor closed. A large panel of speakers in the front of the room was encouraged to ask questions freely and exhaustively. The several hundred other persons were permitted to send written questions forward, many but not all of which were read and discussed. There appeared to be rather considerable impatience with the current level of corrective action, which was not given much expression except on the afternoon of the third day when a red-headed woman from the audience crossed swords with Donald A. Jensen of the Control

---

* Editor's note: Mr. Silver, an environmental engineer, attended this meeting at the request of Dr. Clifton R. Brooks, Chairman of the D.C. Medical Society's Committee on Rehabilitation and Chronic Illness. The meeting, held at the Ambassador Hotel in Los Angeles, March 2–4, 1966, was attended by some 450 people. Mr. Silver is a member of the Board of Directors of the Human Ecology Research Foundation, which was organized in January, 1966 for the purpose of investigating man's relationship with his environment and providing any pertinent information obtained to physicians for use toward improving the health of their patients.

natomy of
ow Back Pain #1
the sedentary life
is often the seat of
low back pain

The human spine is not engineered for prolonged sitting at desks, pianos, typewriters and drafting boards. The stresses set up by the heavy, forward-tilted head and trunk, balanced precariously on an insufficient base, result in strain of the dorsal musculature, particularly at the low lumbar level.

The unusual muscle-relaxant and analgesic properties of 'Soma' make it especially useful in the treatment of low back sprains and strains. 'Soma' is widely prescribed ☐ **to relieve pain** ☐ **to relax muscles** ☐ **to restore mobility.**

Indications: 'Soma' is useful for management of muscle spasm, pain, and stiffness in a variety of inflammatory, traumatic, and degenerative musculoskeletal conditions. It also may act to normalize motor activity in certain neurologic disturbances.

Contraindications: Allergic or idiosyncratic reactions to carisoprodol.

Precautions: 'Soma', like other central nervous system depressants, should be used with caution in patients with known propensity for taking excessive quantities of drugs and in patients with known sensitivity to compounds of similar chemical structure, e.g., meprobamate.

Side Effects: The only side effect reported with any frequency is sleepiness, usually on higher than recommended doses. An occasional patient may not tolerate carisoprodol because of an individual reaction, such as a sensation of weakness. Other rarely observed reactions have included dizziness, ataxia, tremor, agitation, irritability, headache, increase in eosinophil count, flushing of face, and gastrointestinal symptoms.

One instance each of pancytopenia and leukopenia, occurring when carisoprodol was administered with other drugs, has been reported, as has an instance of fixed drug eruption with carisoprodol and subsequent cross reaction to meprobamate. Rare allergic reactions, usually mild, have included one case each of anaphylactoid reaction with mild shock and angioneurotic edema with respiratory difficulty, both reversed with appropriate therapy. In cases of allergic or hypersensitivity reactions, carisoprodol should be discontinued and appropriate therapy initiated. Suicidal attempts may produce coma and/or mild shock and respiratory depression.

Dosage: Usual adult dose is one 350 mg. tablet three times daily and at bedtime.

Supplied: Two Strengths: 350 mg. white tablets and 250 mg. orange, two-piece capsules.

Before prescribing, consult package circular.

for the relief of low back sprains and strains

SOMA®
(CARISOPRODOL)

Wallace Laboratories, Cranbury, N.J.
26S01J

District, and Dr. Murray unburdened his heart at the end of the program.

Dr. Patrick Lawther kept the entire group convulsed with laughter during the presentation of his careful work with London smog. His independence, sincerity and humor were outstanding. Dr. Joseph Wilder gave a strong push to the clinical point of view when he spoke of the personal, subjective, or private measuring or sensing system not necessarily being inferior as a source of information to objective, public, or instrumented measuring systems.

Francis Silver V, P.E.
Consulting Environmental Engineer

Health Dept. Notes

Area C Mental Health Center

There was a dedication ceremony, May 3, at the Area C Community Mental Health Center, which is located on the grounds of D.C. General Hospital.

The new Center is a prototype for such mental health centers in the District. It was established last year with D.C. and Federal funds as a mental health demonstration project, and it particularly represents the trend away from massed institutional care to treatment of the mentally ill in their own communities.

The National Institute of Mental Health made available almost $400,000 to install and operate such a center and recommended that additional financing totaling $1,677,706 be provided over a 5-year period.

To this, the District Government and the Department of Public Health are adding more than $1 million per annum in staff, facilities and other valuations, making this a very substantial program in mental health serving District residents.

Guests of honor at the May 3 dedication included Charles A. Horsky, Advisor (to the President) on National Capital Affairs, and John B. Duncan, D.C. Commissioner.

The Center's activities in its less-than-a-year existence were reviewed, including these highlights:

- An adolescent program offers diagnostic services and treatment for adolescents and their families, primarily as group therapy and as a day-care program, with access to inpatient beds as needed. The Center also offers consultation to schools, settlement houses and other agencies, hoping to develop more preventive services and training opportunity for graduate students in psychology and social work. Future plans include expansion of the inpatient facility.
- An adult program provides outpatient diagnosis, group and individual therapy, a day-care program, a 24-hour inpatient unit, some home visits, and consultation and collaborative work with agencies.
- An alcoholism and drug addiction program offers treatment to alcoholics whose known address is in Area C, including access to a 12-bed inpatient unit; an additional day-care and outpatient program, with most alcoholic patients identified with the latter; group psychotherapy and medication; and a limited outpatient program for drug addicts, on a voluntary basis.
- A children's program offers individual diagnostic care and outpatient treatment; also consultative services to schools, day centers and agencies. There are plans for a therapeutic nursery and a small unit for 24-hour inpatient care.
- A geriatric program for persons aged 65 and over provides inpatient, day and semi-day care; also consultation to agencies involved in the care of the elderly.

In addition to these benefits for the Area C population, the new Center provides some services to the District as a whole. These include a crisis intervention and suicide prevention service, which is a full-time, day and night emergency resource unit. This is staffed with trained mental health nursing assistants to intercept pending suicides who call seeking aid and to act in other emergencies involving the mentally ill and disturbed. More than 3,000 such calls have been received during the past year, 10 per cent directly related to likely suicides and the rest to other mental health situations.

The Department welcomes physician interest in this new emergency service and invites the medical profession to make use of it whenever needed. The telephone number is 629-3536.

We also welcome interest in the larger operation of the Area C Mental Health Center and invite inquiries about it.

Murray Grant, M.D., D.P.H.
D. C. Director of Public Health

"The most important single ingredient in the restoration of normal bowel function is a soft formed bulk of proper consistency"

YOU CAN SAFELY AND EFFECTIVELY PROVIDE THIS INGREDIENT WITH

EITHER KONSYL OR L.A.FORMULA

KONSYL
PLANTAGO OVATA COATING
BURTON, PARSONS & CO

A mixture of pure hemicelluloses

Pure hemicellulose dispersed in lactose ond dextrose

- **in DIARRHEA** . . . Konsyl and L. A. Formula absorb free fecal water to create a formed gel and normal stools.
- **in CONSTIPATION** . . . Konsyl and L. A. Formula retain water in the stool against the strong dehydrating function of the colon.
- Since a liquid stool contains only 10 per cent more water than the hardest scybalum*

L. A. FORMULA
PLANTAGO OVATA COATING
BURTON, PARSONS & CO

KONSYL

For the obese patient who needs calorie free medication

L.A.FORMULA

For the finicky eater who requires unsurpassed palatability

are the

the bowel normalizers of choice

Made by

BURTON, PARSONS & CO., Inc.

Since 1932 Originators of Fine Hydrophilic Colloids

Washington 27, D. C.

Tainter, M.L. and Buchanan, O.H., Ann. N.Y. Acad. Sc. 54:438, 1954

NEWS & PERSONALS

Meetings

A National Conference on Infant Mortality is being sponsored by the AMA's Committee on Maternal and Child Care, to be held, August 12 and 13, at the Fairmont Hotel in San Francisco. An open invitation to attend is extended to chairmen and members of committees of all state and county medical societies concerned with the problems of infant mortality and to other interested physicians and representatives of groups concerned with these problems. Those wishing to receive further information about the Conference should write to the Secretary, Committee on Maternal and Child Care, American Medical Association, 535 North Dearborn Street, Chicago, Ill. 60610.

A training course, "Control of Infections in Hospitals," will be offered in the Exhibit Hall of the Medical Society of the District of Columbia at 2007 Eye Street, N.W., October 11 and 12, 1966. This course is designed for personnel from national, state, local, religious, military, and private hospitals and institutions.

In addition to the Medical Society of the District of Columbia, the course will be sponsored by the Medico-Chirurgical Society of the District of Columbia, Inc.; Georgetown and George Washington University Schools of Medicine; Howard University College of Medicine; Maryland-D.C.-Delaware Hospital Association; Federal Government hospitals of the Metropolitan Washington Area; D. C. Department of Public Health; and the Communicable Disease Center of the U. S. Public Health Service, Atlanta, Ga.

Further information will appear in future issues of the Annals.

General News

The American Medical Association has entered into contract negotiations with the Department of State's Agency for International Development (USAID) under which the AMA will assume complete responsibility for the administration and recruitment programs for **Project Vietnam.**

The program, which has been administered for the USAID by the People-to-People Foundation, furnishes volunteer American physicians to work in Vietnam on a short-term basis, usually for 60 days. As of April 1, 86 volunteer doctors had served there.

Dr. James Z. Appel, President of the AMA, has issued an urgent appeal for volunteer physicians for Project Vietnam. In demand are orthopedic and plastic surgeons, radiologists, and chest physicians, in addition to general practitioners. USAID officials have suggested that the maximum age limit for volunteers be near 55 years.

Interested physicians should write to Project Vietnam, AMA, 535 North Dearborn Street, Chicago, Ill. 60610.

The American Medical Association Education and Research Foundation distributed over $1 million to medical schools throughout the country during April. On April 26, in a brief ceremony at the D. C. Medical Society's headquarters, Dr. Robert J. Coffey, President of the Society, presented checks to the Deans of the 3 medical schools in the District of Columbia. Dr. John C. Rose, of Georgetown University, received a check for $15,680.94; Dr. John Parks, of George Washington University, $10,491.00; and Dr. K. Albert Harden, of Howard University, $5,557.44.

Medical school deans may use the funds as they see fit. The money is usually spent for faculty salaries, improvement of laboratories and libraries, student assistance programs, and general operating expenses.

The Public Health Service has made available for the first time scholarship funds totaling $3,807,800 to 227 schools of medicine, dentistry, optometry, osteopathy, podiatry, and pharmacy under its new **Health Professions Scholarship Program**. Increased enrollment of students in health professions schools is the basic objective. The grants are to be used by such schools to provide assistance to students from low-income families who would not be able to undertake the course of study required to become physicians, dentists, pharmacists, etc. without financial support.

Scholarships will be available to full-time first-year students entering health professions schools in the fall. A student may receive up to $2,500 for an academic year. Administration of the scholarships, including the selection of the student and the amount to be awarded each, is the responsibility of the school.

In the District of Columbia the 3 Schools of Medicine at George Washington University, Georgetown, and Howard, the Schools of Dentistry of Georgetown and Howard, and the Howard University School of Pharmacy have applied for funds. Total funds allotted to these schools are: Howard, $45,400; Georgetown, $44,400; and George Washington, $21,200.

"Horizons Unlimited," a new AMA health career publication, is a 134-page paperback which gives current in-depth information on the preparation for and the rewards of a career in medicine and approximately 50 other careers in 8 major allied fields. The book replaces 2 former AMA guidance kits, "Program Materials on Medical Careers" and "Careers Allied to Medicine." It also replaces the booklet, "Medicine as a Career."

"Horizons Unlimited," as a complimentary item for students, is intended only for those upper high school or beginning college students having a serious interest in medicine or the broad health field. It is not designed for mass distribution at health careers programs. However, a low-cost brochure specifically designed for large scale distribution is available under the title, "The Opportunities and Rewards of Medicine." Physicians and college and high school student counsellors may secure a number of copies of this brochure from the Program Services Department of the American Medical Association, 535 North Dearborn Street, Chicago, Ill. 60610.

Copies of "Horizons Unlimited" are limited but single copies are available without charge. A supply of "Horizons Unlimited" is on hand in the Medical Society's office and may be obtained by a telephone call to 223-2230.

The Public Health Service announces a new illustrated leaflet, prepared for laymen by the National Heart Institute, entitled **"Hardening of the Arteries—Cause of Heart Attacks."** Single copies of the publication (PHS No. 1392) are available without charge from the Public Health Service, Department of Health, Education, and Welfare, Washington, D. C. 20201. Multiple copies, at $6.75 per 100, may be purchased from the Superintendent of Documents, Government Printing Office, Washington, D. C. 20402.

The Section on Ophthalmology of the Medical Society of the District of Columbia, at its meeting at the Kennedy-Warren on April 12, elected the following officers:

Dr. L. Edward Perraut, *President*; Dr. Melvin G. Alper, *Vice President*; Dr. H. William Gray, *Secretary-Treasurer*; Drs. Dan G. Albert and John W. McTigue, *members of the Executive Committee.*

All officers of Group Hospitalization, Inc. were reëlected for another year at the Annual Meeting of its Board of Trustees, March 25. They are: F. P. Rawlings, Jr., President; Howard W. Kacy, President of Acacia Mutual Life Insurance Co., First Vice President; Dr. Ralph D. Whitley, Second Vice President; James H. Lemon, of Johnston, Lemon & Co., Secretary; and Douglas R. Smith, President of National Savings and Trust Co., Treasurer.

Reappointed to the Board of Trustees for 5-year terms were F. Howard McGuigan, of AFL-CIO; Henry W. Herzog, Vice President and Treasurer of George Washington University; and Dr. Brooks G. Brown, general surgeon. Dr. Brown was a nominee of the D. C. Medical Society.

The memory of Dr. Edith SeVille Coale, who died in 1962, is being perpetuated through medical scholarships made available from the proceeds of a generous amount which she left in her will to be administered for this purpose by the Zonta Club of Washington.

During 1965–66, the initial year of the scholarship program, $13,680.00 was expended through scholarships ranging in value from $1,600 to $2,500. Four students from George Washington University School of Medicine benefited, also 2 from Johns Hopkins University School of Medicine, and 1 from the University of Pittsburgh School of Medicine. One of the George Washington students, Alice Martinson, was assigned to the Medico Hospital in Kuala Lipsis for a 3-month period.

For 1966–67, a total of $16,500.00 has been allocated for scholarships. They will go to 3 students at George Washington University, 2 at Johns Hopkins, and 1 each at the University of Pittsburgh, Bowman Gray School of Medicine, and the Medical College of Virginia at Richmond.

The Edith SeVille Coale Scholarship Committee of Zonta is chaired by Mrs. Virginia H. Conway. Among those serving on her Committee are Dr. Claudine M. Gay, Dr. Josephine E. Renshaw, and the Assistant Editor of the Medical Annals, A. Louise Eckburg.

A 6-bed **Intensive Care Unit** was opened **at Suburban Hospital** early in April. Located on the second floor, 2 of the 6 beds will be used for the care of heart attack victims during the 3 crucial days after the attack. Other critically ill patients, such as those suffering from disastrous injuries, e.g., auto injuries, or recovery from extensive surgery, and medical patients requiring intensive nursing care will occupy the other 4 beds in the Unit. Dr. Robert R. Montgomery, now an Associate member of the D. C. Medical Society, will be in charge of the Unit.

A 17-bed Intensive Care Unit is planned for the sixth floor of the new wing at Suburban. Structural changes to this area and equipment will cost $75,000. Contributions are welcome and should be mailed to the Suburban Hospital Building Fund, 8600 Old Georgetown Road, Bethesda 14, Md.

Plans of **Group Hospitalization, Inc.**, which also administers Medical Service of D. C., to build a $5 million headquarters in the Southwest Urban Renewal Area were disclosed, April 6, at a Redevelopment Land Agency board meeting. An 8-story building west of the L'Enfant Plaza development is contemplated. The 3-acre site occupies most of the block bounded by Maryland Avenue, the Southwest Freeway, 12th Street and the 12th Street Expressway. GHI is presently located at 1021 14th Street, N.W.

IN BEHALF of the American Medical Association Dr. Lawrence A. Rapee (left), First Vice President of the Medical Society of the District of Columbia, presents Fred Houwink, Vice President and General Manager of WMAL-TV, the Evening Star Broadcasting Company, with a check for $500 in recognition of the station's award-winning television documentary, "Till We Meet Again." This program was based on case histories taken from the files of St. Elizabeths Hospital, Washington, D.C. WMAL-TV shared the first place award in the AMA Journalism Awards with the National Broadcasting Company. Subsequently Mr. Houwink turned the check over to St. Elizabeths Hospital Patient Fund,

The George Washington University Hospital became the first hospital in the Middle Atlantic States certified to offer Medicare services. In a ceremony at the Municipal Center, April 22, Federal, District, and University officials signed the agreement designating this hospital fully eligible for the Federal Medicare program.

Dr. Milo D. Leavitt, from the National Institutes of Health, has been named to a new post, **Assistant Secretary for Science and Population**. The appointment was made by the Honorable John W. Gardner, Secretary of Health, Education, and Welfare. Dr. Leavitt will work with Dr. Philip R. Lee, Assistant Secretary for Health and Scientific Affairs, who is heading the Medicare program.

Dr. K. Albert Harden was appointed **Acting Dean of Howard University College of Medicine**, December 1, succeeding Dean Robert S. Jason. Dr. Harden received his medical degree from the University of Michigan in 1931 and interned at Freedmen's Hospital the following year. He was a Research Fellow in Chest Service at Bellevue Hospital, Columbia University, from 1944 to 1945. In 1947 he came to Howard University as Associate Professor of Chronic Pulmonary Diseases and later was promoted to Professor and Chief of the Division. He is certified in his specialty by the American Board of Internal Medicine.

Dr. E. H. Christopherson, Executive Director of the American Academy of Pediatrics, has been elected **Chairman of the Council of National Organizations for Children and Youth,** with headquarters in Washington, D. C. The Council is made up of 350 national organizations, including the National Association for Retarded Children, the American Legion, the National Association of Social Workers, the American Foundation for the Blind, the National Council of Churches, and the American Academy of Pediatrics.

Mr. Ralph P. Creer, Director of Medical Motion Pictures and Television for the American Medical Association, has been elected a **Vice President of the Council on International Nontheatrical (Film) Events.** The Council, known as CINE, is the organization which selects motion pictures to represent America abroad in film festivals approved by the Department of State. Mr. Creer has been a member of the Board of Directors of CINE for 10 years and has served as chairman of its committee to select medical and health films for foreign film festivals.

Mr. Brian O'Connell, Executive Director of the California Heart Association, will become the new **Executive Director of the National Association for Mental Health,** July 1. The offices of the Association are at 1107 19th Street, N.W., Washington, D. C.

George Washington University School of Medicine has announced a grant of $66,200 from the National Science Foundation to be used in a study on "Water Movement Across Intestinal Epithelial Membranes." Principal investigator for the project will be Dr. Charles S. Tidball, Fry Professor of Physiology. The grant will also provide approximately $20,000 toward the establishment of an electron microscope facility at the School.

Personals

Dr. T. James Waters, Assistant Professor of Medicine at Georgetown University School of Medicine, has been awarded a 5-year teaching scholarship through the efforts of the Women's Board of the Washington Heart Association. Dr. John F. Finnegan, President of the Washington Heart Association, pointed out that this is the first year that the American Heart Association, through its Council on Clinical Cardiology, has granted teaching scholarships in recognition of the need for better teaching in medical schools in order to transmit to medical students the great advances made in recent years in cardiovascular research.

The scholarship to Dr. Waters, which will become effective July 1, carries a stipend of $13,500 for the first year and an annual increment of $1,000 for each succeeding year.

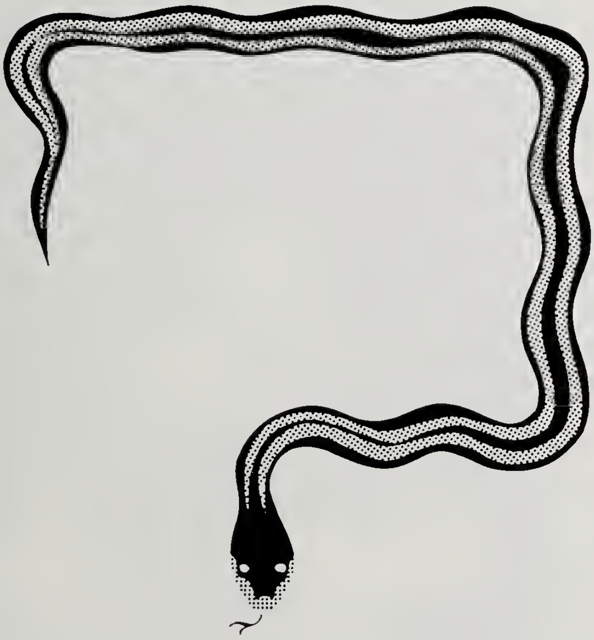
Dr. Waters received his medical degree from Georgetown University in 1958. He completed his chief residency at Georgetown in 1963 and since then has been a member of the faculty, teaching cardiology and internal medicine.

Dr. Raymond L. Schwartz, of Arlington, Va., an Associate member of the D. C. Medical Society, has been advanced to the position of Clinical Professor of Medicine at Georgetown University School of Medicine. Dr. Schwartz was recently elected a Fellow of the American College of Physicians.

Dr. C. Francis Scalessa, pediatrician, was one of 4 Washingtonians who recently received the President's Medal from St. John's College. The presentations were made at the annual Father-Son Banquet, held at the Shoreham Hotel, May 13. For over 9 years Dr. Scalessa has contributed his services to the cadets and faculty of the school. Conducted by the Christian Brothers, St. John's, a military high school, is this year celebrating its 115th anniversary.

Dr. Thomas L. Hartman was elected an Associate of the American College of Physicians on April 17.

"In 40 of 44 cases of irritable or spastic colon, Cantil [mepenzolate bromide] or Cantil with Phenobarbital reduced or abolished abdominal pain, diarrhea and distention and promoted restoration of normal bowel function . . . Cantil [mepenzolate bromide] proved to be singularly free of anticholinergic side-effects . . . Urinary retention, noted in two cases was eliminated in one by reducing dosage."[1]



CANTIL®

(mepenzolate bromide)

helps restore normal motility and tone

IN BRIEF:

One or two tablets three times a day and one or two at bedtime usually provide prompt relief. Cantil with Phenobarbital may be prescribed if sedation is required.

Dryness of the mouth or blurring of vision may occur but it is usually mild and transitory. Urinary retention is rare. Caution should be observed in prostatic hypertrophy—withhold in glaucoma. Cantil with Phenobarbital is contraindicated in patients sensitive to phenobarbital.

Supplied: CANTIL (mepenzolate bromide) —25 mg. per scored tablet. Bottles of 100 and 250. CANTIL with PHENOBARBITAL —containing in each scored tablet 16 mg. phenobarbital (warning: may be habit forming) and 25 mg. mepenzolate bromide. Bottles of 100 and 250.

1. Riese, J.A.: Amer. J. Gastroent. 28:541 (Nov.) 1957

LAKESIDE LABORATORIES, INC., Milwaukee, Wisconsin 53201

LAKESIDE

PRODUCTS
FOR PATIENTS
YOU SEE
EVERY DAY

Letters to the Editor

Physicians' Teaching Services Lauded

It might interest members of the Medical Society of the District of Columbia to know an example of the fact that physicians are vitally interested in giving of their time to public service of an educational nature.

As part of an area-wide 6-month campaign to educate adult women to form the habit of having a yearly pelvic examination, including a Pap test, "Time and Two Women," the American Cancer Society's film stressing the importance of early diagnosis in cancer of the cervix, was shown on 3 successive mornings in 16 neighborhood theaters in the District of Columbia during the second snowbound week of February. These 48 programs were led by 38 physicians. They enlarged upon the message delivered via film by the late Dr. Joe V. Meigs and discussed questions asked by members of the small but enthusiastic audiences.

It is revealing to note that:

14 Obstetricians and Gynecologists	covered 16 programs
5 General Surgeons	covered 10 programs
10 General Practitioners	covered 11 programs
3 Pathologists	covered 3 programs
1 Radiologist	covered 1 program
1 Resident in Radiology	covered 3 programs
1 Resident in Surgery	covered 1 program
1 Resident in OB-GYN	covered 1 program
2 Public Health doctors	covered 4 programs

Two programs boasted experienced program leaders as well as residents. In not one instance did a physician fail to keep his appointment at a theater.

Assisting the physicians were nearly 100 volunteer hostesses. The theaters were donated by the management. The projectionists and theater staff gave their services. Most enthusiastic reports of the high quality of the programs have come in from both hostesses and audiences.

The image of the physician as teacher and counsellor is enhanced by this type of splendid public service. Some of us might hope that more Society members will become involved in this kind of educational activity under the aegis of the voluntary health organizations such as the American Cancer Society.

Lois I. Platt, M.D.
Uterine Cancer Project Committee, the George Washington University Cancer Clinic

Spring Garden Salad
Sealtest
TRADE MARK
COTTAGE CHEESE
Sealtest
Spring Garden Salad
Cottage Cheese
Sealtest
Spring Garden Salad
Cottage Cheese

Obituaries

Frederick Daniel Suttenfield, M.D.

(1908–1966)

Dr. Frederick Daniel Suttenfield, a former member of the Medical Society of the District of Columbia, died, January 13, 1966 at his home in Falling Springs, near Shepherdstown, West Virginia. Dr. Suttenfield was a veteran of World War II, having served for 5 years in the Medical Corps of the United States Army, rising to the rank of Lt. Colonel.

Dr. Suttenfield was born in Rockingham County, North Carolina, August 4, 1908 to Emmett R. and Callie Jane Suttenfield. He attended public schools in Leaksville, N.C., and enrolled at the University of North Carolina for premedical study. He graduated in medicine from George Washington University in 1937. He interned at Garfield Memorial Hospital and served a residency at Georgetown Hospital, 1938-39, concurrently with a fellowship in internal medicine.

He engaged in the practice of internal medicine in Washington from 1939 to 1957, except for tours of duty with the Army during World War II and the Korean conflict. His subspecialties were arthritis and rheumatism.

During the past 4 years he had served with the Veterans Administration as a senior grade physician, limiting his practice to physical medicine and rehabilitation at teaching hospitals affiliated with Ohio State, Baylor and Pittsburgh Universities.

Dr. Suttenfield was a charter member of the American Heart Association and the American Geriatrics Society, of which he was National Vice President for 2 terms. He was Past President of the American Medical Society of Vienna, Past National Surgeon of the Reserve Officers Associa-

DACTILASE®

Each tablet contains:
Dactil® (piperidolate hydrochloride), 50 mg.;
Standardized cellulolytic* enzyme, 2 mg.;
Standardized amylolytic enzyme, 15 mg.;
Standardized proteolytic enzyme, 10 mg.;
Pancreatin 3X** (source of lipolytic activity), 100 mg.; Taurocholic acid, 15 mg.

*Need in human nutrition not established.
**As acid resistant granules equivalent in activity to 300 mg. Pancreatin N.F.

WHEN
STOMACHS
ARE ALL
BUTTERFLIES
AND
GAS

In chronic or acute indigestion, fluttery, gassy stomachs obtain prompt, gratifying relief through the antispasmodic, surface anesthetic and enzymatic activity of Dactilase. Dactilase decreases hypermotility and pain and reduces the production of gas. Dactilase does not induce stasis, but helps restore normal tone. It has little or no effect on enzyme secretions, but *adds* enzymes, thus contributing to the digestive efficiency of the patient.

Side Effects and Contraindications: Dactilase is almost entirely free of side effects. However, it should be withheld in glaucoma and in jaundice due to complete biliary obstruction.

Administration and Dosage: One tablet with, or immediately following, each meal. Tablets should be swallowed whole.

Supplied: Bottles of 60 and 250.

LAKESIDE LABORATORIES, INC., Milwaukee, Wisconsin 53201

LAKESIDE

PRODUCTS
FOR PATIENTS
YOU SEE
EVERY DAY

tion of the United States, and a member of the National Board of Medical Examiners. He was a member of the American Medical Association, the Southern Medical Association, the Association of Military Surgeons of the United States, and the Association of Medical Rehabilitation Directors. He was an Associate member of the Medical Society of the District of Columbia from 1940 to 1947, when be became an Active member. He resigned in 1957.

He is survived by his wife, Mrs. Elise Hill Suttenfield; a son, Frederick Daniel, Jr., and 2 daughters, Diane and Dawn, all of the home address. His father, now living in Greensboro, N. C., also survives him, together with 4 sisters, Mrs. John Foushee, of Chapel Hill, N. C.; Mrs. Robert Gee, of Kingsport, Tenn.; Mrs. John Kirkman, of Greensboro, N. C.; and Mrs. Hughes Fagge, of Burlington, N. C. He also leaves 2 brothers, James Suttenfield, of Burlington, and Harold Suttenfield, of Greensboro.

Thomas Andrew Christensen, B.S., M.D.

(1908–1966)

Dr. Thomas A. Christensen, a pediatrician in College Park, Md. for 27 years, died, May 3, 1966 at Prince Georges General Hospital in Cheverly, Md.

Dr. Christensen was born in Newport, R.I., April 25, 1908. He received his Bachelor of Science degree from Holy Cross College, Washington, in 1931, and his medical degree from Georgetown University in 1935. He began private practice in Greenbelt in 1938 and had practiced in College Park since 1939.

Dr. Christensen was on the faculty of the University of Maryland as Instructor in Pediatrics from 1937 to 1940. He was Chief of Pediatrics at Prince Georges Hospital. During World War II, from 1942 to 1946, he served in the Medical Corps of the U. S. Navy.

Dr. Christensen was a diplomate of the American Board of Pediatrics. He was a member of the American Academy of Pediatrics, the Medical and Chirurgical Faculty of the State of Maryland, and an Associate member of the D. C. Medical Society since 1944. He was Past President of the Prince Georges County Medical Society and the County Heart Association.

Surviving him are his wife, Mrs. Kathryn M. Christensen and 2 daughters, Kathryn and Sheila, residing at their home at 6905 Baltimore Avenue, College Park, Md. He leaves a son, Thomas A. Christensen, Jr., of Beltsville, Md., and a sister, Mrs. Frank Stein, of Newport, R. I.

Walter A. Leas, D.D.S.

(1898–1966)

Dr. Walter A. Leas, who practiced dentistry in Washington for 30 years, died at Doctors Hospital, April 2, 1966.

Dr. Leas was born in Greenville, Ohio, July 20, 1898. He graduated in dental surgery from Ohio State University in 1921.

He practiced in Dayton, Ohio for a number of years before coming to Washington in 1933. Before he retired in 1963, his offices were at 2301 Calvert Street, N.W., at the Mount Vernon Convalescent Hospital, where he served as General Superintendent.

Dr. Leas was a member of the American Dental Association and the D. C. Dental Society. He was an Associate member of the D. C. Medical Society from 1952 until 1963.

Surviving him are his wife, Mrs. Florence Leas, of the home address, 5440 33rd Street, N.W.; a son, Normund Leas, of Silver Spring, Md.; and 2 daughters, Mrs. William Brown, of Riverdale, N. J., and Mrs. Kevin Smith, of Hyattsville, Md. He also leaves a brother, Frank S. Leas, of Greenville, Ohio, and a sister, Mrs. Leroy Niswonger, of Pompano Beach, Fla.

Unusual Aspects of Pheochromocytoma—Sode et al

(*Continued from page 315*)

22. Engleman, K., and Sjoerdsma, A.: Ann. Intern. Med., 1964, **61**, 229.
23. Spector, S., Sjoerdsma, A., and Udenfriend, S.: J. Pharmacol. Exp. Ther., 1965, **147**, 86.
24. Crout, J. R., and Sjoerdsma, A.: J. Clin. Invest., 1964, **43**, 94.
25. Maling, H., Highman, B., and Thompson, E. C.: Amer. J. Cardiol., 1960, **5**, 628.

Gastroduodenal Intussusception—Wilson

(*Continued from page 321*)

Summary

The problem of gastroduodenal intussusception has been reviewed briefly. It would appear that benign gastric tumors and polyps can be forced by peristalsis through the pylorus and can draw varying amounts of stomach with them into the duodenum. The clinical picture may be confusing, but it is generally that of episodic

For cold hands and feet, nothing beats hot stoves—but they *are* awkward to carry around. Now Gerilid, in good-tasting take-along chewable tablets can provide rapid vasodilation of peripheral circulation, bringing real warmth to the extremities and decreasing sensitivity to sudden temperature change. Patients *like* Gerilid and *know* they are getting relief.

WARMTH
FOR COLD
HANDS AND FEET

GERILID™

Each chewable tablet contains:
nicotinic acid (niacin) 75 mg. and
aminoacetic acid (glycine) 750 mg.

Administration and Dosage: One or two chewable tablets 3 times a day before meals. If flushing is objectionable, dosage may be lowered. However, tolerance to flushing usually develops without loss of efficacy in regard to vasodilation. The recommended dosage should not be exceeded.

Side effects: Occasional lightheadedness or transient itching which may disappear with continued use. There are no known contraindications; however, caution is advised when there is a concomitant administration of a coronary vasodilator.

Supplied: Packages of 50 chewable tablets.

Also available in liquid form as Geriliquid®, in bottles of 8 and 16 ounces.

LAKESIDE LABORATORIES, INC., Milwaukee, Wisconsin 53201

LAKESIDE

PRODUCTS
FOR PATIENTS
YOU SEE
EVERY DAY

CAPITAL NURSE
REGISTRY
(Est. 1910)
Licensed
Practical
Nurses and
Practical
Nurses
Recommended
by Physicians

All Nurses Have Had Hospital Training

One of Washington's outstanding
Registries, serving physicians
and surgeons since 1910

LICENSED BY DISTRICT OF COLUMBIA

24 Hour Telephone Service

RAndolph 3-2600 or 3-1771

gastric obstruction with or without bleeding. The radiographic picture may be helpful in the diagnosis if the abnormal mechanical condition is suspected. The correction of the problem is by surgery, and it would appear that a conservative removal of the tumor mass or a limited gastrectomy is generally adequate. In a review of the literature no examples were found in which malignant lesions caused the intussusception, but it would seem reasonable that they could do so. A case of gastroduodenal intussusception diagnosed preoperatively and corrected surgically has been presented.

References

1. Hobbs, W. H., and Cohen, S. E.: Gastroduodenal invagination due to a submucous lipoma of the stomach. Amer. J. Surg., 1946, **71**, 505.
2. Lönnerblad, L.: Zwei fälle von mageninvagination. Acta Radiol. (Stockholm), 1933, **14**, 82.
3. Grönlie, S., and Rosseland, B.: Gastroduodenal intussusception. Amer. J. Roentgen., 1961, **86**, 900.
4. Child, C. G., III, and Braunstein, P. W.: Gastroduodenal intussusception with massive hemorrhage. Surgery, 1953, **34**, 754.
5. Amendola, F. H.: Gastroduodenal intussusception. Ann. Surg., 1948, **128**, 1028.
6. Cope, V. Z.: Polyposis of the stomach with intussusception into the duodenum. J. Int. Coll. Surg., 1950, **13**, 497.
7. Riccobono, X. J., and Haskins, R. M.: Gastroduodenal intussusception; report of two cases. Gastroenterology, 1960, **38**, 995.

Tuberous Sclerosis—Noer and Harmon

(*Continued from page 325*)

References

1. Whitaker, P. H.: Radiological manifestations in tuberose sclerosis. Brit. J. Radiol., 1959, **32**, 152.
2. Hawkins, T.: Radiological bone changes in tuberose sclerosis. Ibid., 1959, **32**, 157.
3. Noer, H. R.: Diagnosis of tuberous sclerosis: report of cases observed at the State of Wisconsin General Hospital (1948). (Thesis submitted in partial fulfillment of the requirements for the degree of M.D., available from the library of the University of Wisconsin.)

Therapy of Neurotic Symptom by "Desensitization" —Cavanagh

(*Continued from page 326*)

ordinarily considered neurotic and ordinarily treated in association with some efforts to obtain an understanding of the genesis of the symptoms can, in some cases, be treated effectively by techniques directed to the symptom itself and without the occurrence of substitute symptoms.

I am aware that factors other than the "desensitizing" procedures described might account for the remission, at least in part, and that many questions might be raised by thoughtful psychiatrists that might be answered in a more detailed report. However, in view of the considerable recent interest in this method, as reflected in the literature, and the numerous reports of its successful application in a variety of neurotic conditions, it was thought that this brief note of 1 psychiatrist's first attempt in utilizing this approach might be of general interest.

Reference

1. Wolpe, J.: Isolation of a conditioning procedure as the crucial psychotherapeutic factor: a case study. J. Nerv. Ment. Dis., 1962, **134**, 316.

Obstetrical or post—surgical patients requiring a dependable increase in hemoglobin will receive as much iron (250 mg. in a 5 cc. ampul) as in one pint of blood. Imferon (iron dextran injection) is less expensive and it avoids the well-recognized hazards of whole blood transfusion. When patients cannot—or cannot be relied upon to—take oral iron, Imferon (iron dextran injection) will rapidly supply needed iron for reserve stores.

ONE PINT OF BLOOD PROVIDES NO MORE IRON
THAN ONE 5 CC. AMPUL OF

IMFERON®
(iron dextran injection)

IN BRIEF: ACTION AND USES: A single dose of Imferon (iron dextran injection) will measurably begin to raise hemoglobin and a complete course of therapy will effectively rebuild iron reserves. The drug is indicated only for specifically-diagnosed cases of iron deficiency anemia and then only when oral administration of iron is ineffective or impractical. Such iron deficiency may include: patients in the last trimester of pregnancy; patients with gastrointestinal disease or those recovering from gastrointestinal surgery; patients with chronic bleeding with continual and extensive iron losses not rapidly replenishable with oral iron; patients intolerant of blood transfusion as a *source of iron;* infants with hypochromic anemia; patients who cannot be relied upon to take oral iron.
COMPOSITION: Imferon (iron dextran injection) is a well-tolerated solution of iron dextran complex providing an equivalent of 50 mg. in each cc. The solution contains 0.9% sodium chloride and has a pH of 5.2-6.0. The 10 cc. vial contains 0.5% phenol as a preservative.
ADMINISTRATION AND DOSAGE: Dosage, based upon body weight and Gm. Hb./100 cc. of blood, ranges from 0.5 cc. in infants to 5.0 cc. in adults, daily, every other day, or weekly. The total iron requirement for the individual patient is readily obtainable from the dosage chart in the package insert. Deep intramuscular injection in the upper outer quadrant of the buttock, using a Z-track technique, (with displacement of the skin laterally prior to injection), insures absorption and will help avoid staining of the skin. A 2-inch needle is recommended for the adult of average size.
SIDE EFFECTS: Local and systemic side effects are few. Staining of the skin may occur. Excessive dosage, beyond the calculated need, may cause hemosiderosis. Although allergic or anaphylactoid reactions are not common, occasional severe reactions have been observed, including three fatal reactions which may have been due to Imferon (iron dextran injection). Urticaria, arthralgia, lymphadenopathy, nausea, headache and fever have occasionally been reported. Initial test doses of 0.5 cc. are advisable.
PRECAUTIONS: If sensitivity to test doses is manifested, the drug should not be given. Imferon (iron dextran injection) must be administered by deep intramuscular injection only. Inject only in the upper outer quadrant of the buttock, not in the arm or other exposed area.
CONTRAINDICATIONS: Imferon (iron dextran injection) is contraindicated in patients sensitive to iron dextran complex. Since its use is intended for the treatment of iron deficiency anemia only it is contraindicated in other anemias.
CARCINOGENICITY POTENTIAL: Using relatively massive doses, Imferon (iron dextran injection) has been shown to produce sarcoma in rats, mice and rabbits and possibly in hamsters, but not in guinea pigs. The risk of carcinogenesis, if any in man, following recommended therapy with Imferon (iron dextran injection) appears to be extremely small.
SUPPLIED: 2 cc. ampuls, boxes of 10; 5 cc. ampuls, boxes of 4; 10 cc. multiple dose vials.

LAKESIDE LABORATORIES, INC., Milwaukee, Wisconsin 53201

LAKESIDE

PRODUCTS
FOR PATIENTS
YOU SEE
EVERY DAY

BOOK REVIEWS

Neurological Surgery of Trauma. Colonel John Boyd Coates, Jr., MC, USA, Editor-in-Chief; Arnold M. Meirowsky, M.D., Editor, and 27 contributing authors. Prepared and published under the direction of Lt. General Leonard D. Heaton, The Surgeon General, United States Army. Price, $6.25. Pp. 604, with 273 illustrations and 35 tables. Washington, D.C.: Superintendent of Documents, U.S. Government Printing Office, 1965.

This compendium is reminiscent of "War Supplement Number One, Wounds of the Head," published by the *British Journal of Surgery* in 1947. General Heaton and his editors have assembled a group of neurosurgeons and allied specialists, with extensive military experience, most of whom are engaged currently in the pursuit of their work as civilians. Such a background of the authors improves the usefulness of the book for civilian adaptation. The early history of trauma to the nervous system is reviewed and compared with the ultimate attainments developed in the Korean War. The salvage and the useful rehabilitation of soldiers are impressive and clearly reflect the early and definitive neurosurgical attention they received and the later restorative methods applied under elective circumstances.

Systematically, the head injuries, both closed and open, are described and their individual managements outlined. Appropriate emphasis is applied to the importance of an immediate unobstructed airway, attention to hemorrhage and multiple wounds, adequate débridement, and general supportive measures. Surgical wounds are classified and reported by categories, such as (1) Compound Fractures, (2) Penetrating Wounds of the Brain, (3) Hematomas, (4) Through-and-through Wounds, (5) Injuries to the Dural Sinuses, (6) Penetrations of the Air Sinuses, (7) Complicating Infection, and (8) Cerebrospinal Fluid Fistulae. They are well illustrated. In fact, in some areas there is excessive illustrative detail. A good summary, including historical data and illustrations, of the repair of cranial defects follows the discussion of the more urgent problems concerned with the management of acute head wounds. There is a chapter dedicated to post-traumatic epilepsy.

The field of spinal cord injury is adequately developed, and special associated problems such as urinary function, the management of spasticity, and physical therapy are thoroughly discussed. Especially adaptable to civilian use is the chapter devoted to the intervertebral disc injury and its methods of management. There is an excellent description of the injuries to peripheral nerves, and many diagrams and anatomical drawings implement the understanding of these injuries and serve as useful reference.

Finally, it should be noted that this book is a volume of specialized work and without widespread application. It is primarily useful to the military surgeon, the civilian physician concerned with trauma, and to the physician in pursuit of training in neurological surgery. The modest cost and the easy availability make it a valuable adjunct to the resident neurosurgeon's library.

Stacy L. Rollins, Jr., M.D.

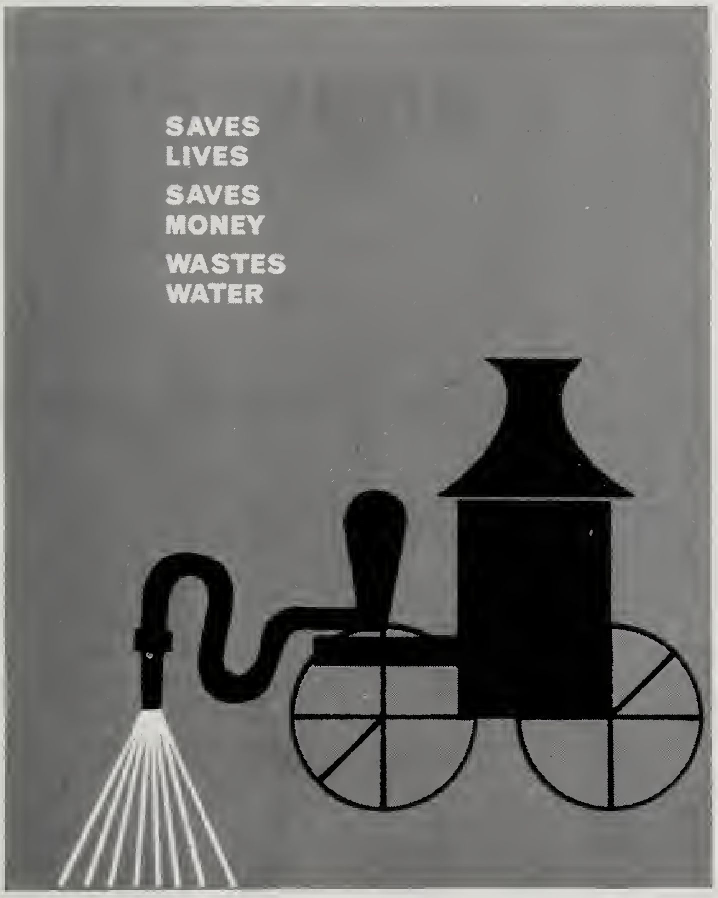
Controversy in Internal Medicine. Edited by Franz J. Ingelfinger, M.D., Arnold S. Relman, M.D., and Maxwell Finland, M.D. Price, $14.50. Pp. 679, illustrated. Philadelphia: Saunders, 1966.

In the introduction of this unusual book the distinguished authors examine with discernment the reason for focusing on 23 controversial medical "issues" and at the same time they point out that the contributors, pro and con, were asked to submit their views without knowledge of what an opponent might write. This does keep the issue from being joined in a number of instances, but on the whole the resultant high quality of the result has produced a collection of papers which every internist will wish to read. Though most doctors are highly individualistic and quite comfortable in their differences with respect to diagnosis and treatment, they are not, I suspect, comfortable when asked to participate in a "controversy," especially when that "controversy" is going to be published. To be very safe, therefore, each contributor has written carefully and with adequate documentation. But sparks do fly and there are sharp differences of opinion here. For example, Drs. William Crosby and Richard MacDonald take sharply divergent paths in deciding whether hemochromatosis is acquired or hereditary. In spite of differing conclusions the arguments are of high order with much to be learned in the process of finding that the experts disagree profoundly. And often strong differences of opinion have a way in medicine of both being correct in part and, therefore, both are incorporated in a higher synthesis of knowledge.

The editors have served us well by asking competent and articulate physicians the tough questions—questions such as, Should we anticoagulate patients with myocardial infarction? Do ulcer diets have any value and should we impose them rigidly on our patients? What value is there in fibrinolytic therapy? What is the significance of asymptomatic bacteriuria and should it always be treated? These and many more controversial questions are what make this book so readable and timely. And the editors have added comments which are valuable to the the reader in "sharpening the issue or providing background or drawing attention to other facets of the topic." Most of the subspecialties of internal medicine are represented. The book should find a broad appeal among those who are interested in the uncertain as well as the certain.

Stanley J. Talpers, M.D.

(*Continued on page 30*)



METAHYDRIN (trichlormethiazide) is prescribed by physicians because it not only approximates the diuretic efficacy of parenteral meralluride injection . . . but, *it is the least expensive of all "brand-name" thiazides.* Therefore, when you prescribe METAHYDRIN (trichlormethiazide) your patients receive the thiazide diuretic that removes a little more salt and water than earlier thiazides, with relatively less loss of potassium . . . and, it's therapy they can more easily afford . . . *only pennies a day.*

METAHYDRIN®
(trichlormethiazide)
oral diuretic

Dosage: One 2 or 4 mg. tablet once or twice daily.

Precautions: As with all effective diuretics, vigorous therapy may produce electrolyte depletion. Patients with severely reduced renal function should be observed carefully since thiazides may be contraindicated. Care should be taken with patients predisposed to diabetes or gout. Patients with a tendency to potassium deficiency, as in hepatic cirrhosis or diarrheal syndromes, or those under therapy with digitalis, ACTH, or certain adrenal steroids, also should be watched carefully.

Side Effects: Nausea, flushing, constipation, skin rash, muscle cramps and gastric discomfort have occasionally been noted; rarely thrombocytopenia and bone marrow depression, photosensitivity, cholestatic jaundice, pancreatitis, perimacular edema, gout and diabetes have been caused by the administration of thiazides.

Contraindications: Complete renal shutdown; rising azotemia or development of hyperkalemia or acidosis in severe renal disease; demonstrated hypersensitivity.

How Supplied: Bottles of 100 and 1000 tablets.

LAKESIDE LABORATORIES, INC., Milwaukee, Wisconsin 53201

LAKESIDE

PRODUCTS
FOR PATIENTS
YOU SEE
EVERY DAY

Book Reviews

(*Continued from page 28*)

Ferment in Medicine. A Study of the Essence of Medical Practice and of Its New Dilemmas. Richard M. Magraw, M.D. With a chapter on Automation in Medicine, written in collaboration with Daniel B. Magraw, M.B.A. Price, $6.50. Pp. 272. Philadelphia: Saunders, 1966.

This is a timely book about an extremely important subject: the changing role of the medical practitioner in modern society—a role which is truly in ferment. The material is well covered, although verbose at times, and is separated into 15 chapters, each dealing with a different aspect affecting the doctor's position in present-day medical practice. It also includes a preface, index, and a rather interesting epilogue.

Dr. Magraw is a professor in the Departments of Internal Medicine and Psychiatry at the University of Minnesota. As a result of this background, he tends to approach the problem in a philosophical and psychological manner.

At times the contents seem to ramble, but by and large an attempt is made to illustrate the effect of hospital, ancillary professions, third-party economics, the public, unions, industry, medical schools, etc. upon the practice of medicine.

I cannot say that I agree entirely with his conclusions, which seem to be rather pessimistic regarding the present and future roles of the private practitioner. He thinks that the doctor has become merely one cog of many in the "medical industry." It is his belief that the physician must accept this change without further antagonism. In other words, he must accept a subordinate role and learn to like it. In his discussion he frequently uses the term "consumer" for patient and "vendor" for doctor. It is difficult to accept this philosophy in its entirety. To illustrate his thinking, he stresses the prominence of the hospital in the medical hierarchy at the expense of the physician. He underlines that the former, to all intents and purposes, now has a licensing power over the physician. However, if the physician is bound to the hospital, the converse must also be true. The hospital can hardly function without the physician. The book can be recommended particularly to students, new practitioners, and those who have a hand in the politics of medicine.

Irving Burka, M.D.

Current Concepts in Medical Practice. John E. Mullins, M.D., Editor. Price, $10.75. Pp. 436, illustrated. St. Louis: Mosby, 1965.

This volume, approximately 5 by 8 inches in size, is bound attractively in blue, black and gold. The editor in his preface states that the philosophy of the authors of this book is to offer a palatable summation of recent developments without exhausting either the subject or the reader. The authors, 9 in all, have ably succeeded.

The table of contents lists 10 main chapters, ranging from eye to arthritis. For each chapter there is an exhaustive bibliography.

The table of contents, brief though it may be, will not be repeated here. In fact, a glance through the 27-page index gives a far better idea of the subjects covered than does the table of contents. Here are a few examples of the topics of current interest included to demonstrate the vast array of information the editor has marshaled: actinomycin D in cancer therapy, aldosterone stimulatory factors, amotriphene in arrhythmias, antibiotics in acute pancreatitis, differential diagnosis of ascites, epidemiology and natural history of atherosclerosis, inadequacies of barium enemas, betamethasone in emphysema, Burkitt lymphoma, complications following gastric freezing, diagnoses of ocular toxoplasmosis, fascia lata in eye surgery, the Heath test, contagiousness of leukemia, laser light in diabetic retinopathy, neurologic disorders in porphyria, resin sponge test of thyroid function, silicone foam enemas, and surgery for stroke. (The generalist, internist, and pediatrician cannot fail to be impressed.)

As I went through this index I was hard put to come up with a medical subject (for which I might need up-to-date information) that was not covered in this volume.

Dr. Mullins ended his brief preface by saying, "Thus, what follows is designed to be educational and brief and so may it be." And so it is; delightfully so.

Raymond O. West, M.D.

Doctors

Office space available. Beautiful suites in a new luxury apartment hotel on Wisconsin Avenue, one block north of the District Line. Roof-top pool privileges plus secretarial service. Adequate parking.

HIGHLAND HOUSE

5480 Wisconsin Avenue, Chevy Chase, Maryland

Phone 657-3600

Metatensin lowers blood pressure and keeps it low—effectively and economically. It combines reserpine with trichlormethiazide which affords more potent saluresis with less loss of potassium than from earlier thiazides. Reserpine contributes antihypertensive effect by relieving anxiety and tension. Metatensin is well-tolerated over long periods; with its effectiveness and economy it assures antihypertensive therapy you and your patients can stay with.

**BRING IT DOWN
AND
KEEP IT DOWN**

190/102

METATENSIN®

Each scored tablet contains:
METAHYDRIN® (trichlormethiazide)
2 mg. or 4 mg. and
Reserpine 0.1 mg.

Usual adult dose: One tablet twice daily. **Precautions and side effects:** Patients with hepatic cirrhosis or diarrheal syndromes, or under therapy with digitalis, ACTH, or potassium-losing steroids, should be observed for signs of hypokalemia. With thiazides, electrolyte depletion, diabetes, gout, granulopenia, nausea, pancreatitis, cholestatic jaundice, flushing, mild muscle cramps, constipation, photosensitivity, acute myopia, perimacular edema, paresthesias, neonatal bone marrow depression in infants of mothers who received thiazides during pregnancy, skin rash or purpura with or without thrombocytopenia, may occur. With reserpine, untoward effects may include depression, peptic ulcer and bronchial asthma. Withdraw medication at least 7 days prior to electroshock therapy, 2 weeks prior to elective surgery.

Contraindications: Complete renal shutdown, rising azotemia or development of hyperkalemia or acidosis in severe renal disease.

Supplied: Metatensin tablets, 2 mg., 4 mg.—bottles of 100 and 1000.

LAKESIDE LABORATORIES, INC., Milwaukee, Wisconsin 53201

LAKESIDE

PRODUCTS
FOR PATIENTS
YOU SEE
EVERY DAY

when the feeling of guilt overwhelms

NORPRAMIN®

(desipramine hydrochloride)

non-sedating · rapid-acting
ANTIDEPRESSANT

overcomes guilt, lifts depression, restores confidence

Feelings of guilt, worthlessness, emptiness and loss frequently characterize depression. Such feelings, along with insomnia, physical complaints, sadness, apprehension, and other symptoms of depression rapidly respond to Norpramin (desipramine hydrochloride). Improvement often begins in 2-5 days, sometimes in less. A few patients, sensitive to central nervous system stimulants may become restless as depression is lifted—in such cases dosage may be reduced or a tranquilizer added.

Indications: In depression of any kind—neurotic and psychotic depressive reactions; manic-depressive or involutional psychotic reactions. **Dosage:** Optimal results are obtained at a dosage of two 25 mg. tablets t.i.d. (150 mg./day). **Contraindications and Precautions:** Glaucoma, urethral or ureteral spasm, recent myocardial infarction, severe coronary heart disease and epilepsy. Should not be given within two weeks of treatment with a monoamine oxidase inhibitor. Safety in human pregnancy has not been established. **Adverse Effects:** Side effects, usually mild may include: dry mouth, constipation, dizziness, palpitation, delayed urination, "bad taste," sensory illusion, tinnitus, agitation and stimulation, sweating, drowsiness, headache, orthostatic hypotension, flushing, nausea, cramps, weakness, blurred vision and mydriasis, rash, allergy, transient eosinophilia, granulopenia, altered liver function, ataxia and extrapyramidal signs. **Supplied:** Norpramin (desipramine hydrochloride) tablets of 25 mg., in bottles of 50, 500 and 1000.

LAKESIDE LABORATORIES, INC., Milwaukee, Wisconsin 53201

LAKESIDE

PRODUCTS
FOR PATIENTS
YOU SEE
EVERY DAY

In colicky infants Pediatric Piptal with Phenobarbital slows down spasm, diminishes pain and crying and improves feeding patterns. It permits sleep and rest for patient and family. The less than hypnotic amount of phenobarbital in the recommended dose affords a mild, calming action and enhances the antispasmodic action of Piptal (pipenzolate bromide). The latter drug, as reported in the medical literature, has a favorable ratio of effectiveness to side-effects which is unusual in anticholinergics and thus is particularly appropriate to pediatric use.

QUIETS PHONES
QUIETS PARENTS
QUIETS **COLIC**

PEDIATRIC PIPTAL® WITH PHENOBARBITAL

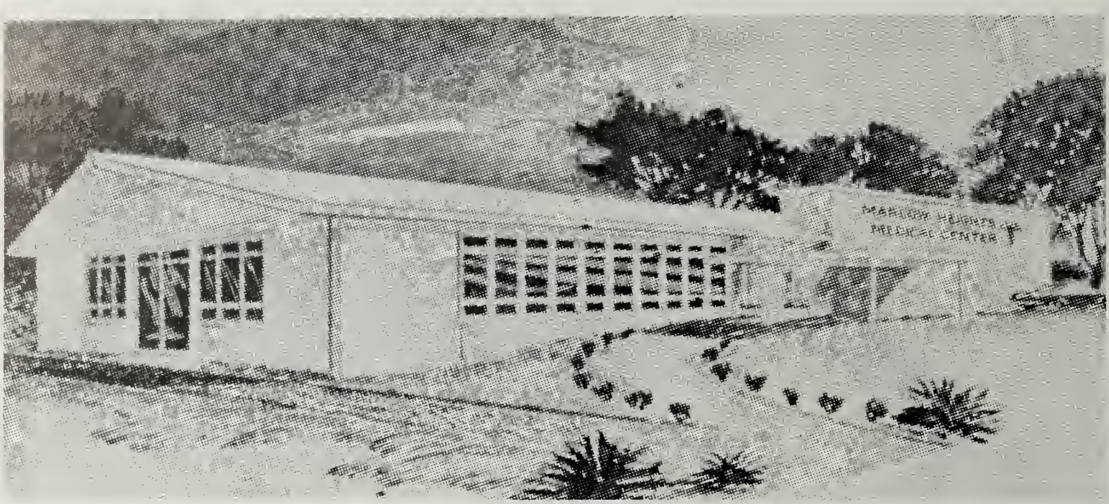
each cc. contains 6 mg. phenobarbital (warning: may be habit forming); 4 mg. Piptal® (pipenzolate bromide), and 20% alcohol.

Pleasant-tasting Pediatric Piptal with Phenobarbital is miscible in milk, formulas and fruit juices, and may also be given by dropper directly on the infant's tongue. Dosage is 0.5 cc. 15 minutes before feeding; in severe cases, 1.0 cc. four times daily. High doses may occasionally cause constipation with tenesmus and, rarely, flushing without fever. It is contraindicated in bowel obstruction or sensitivity to phenobarbital or anticholinergics. Available in 30 cc. dropper bottles, droppers calibrated to deliver 0.5 cc.

LAKESIDE LABORATORIES, INC., Milwaukee, Wisconsin 53201

LAKESIDE

PRODUCTS
FOR PATIENTS
YOU SEE
EVERY DAY



MARLOW HEIGHTS MEDICAL CENTER

Adjacent to
Capital Beltway

Suites available for
immediate occupancy

A medical building striking in appearance and architectural design that meets the most demanding requirements of doctors and dentists for prestige, working efficiency and comfort.

FOR INFORMATION CALL OR WRITE TO . . .

GA-LA CORPORATION

4302 St. Barnabas Road, S.E. Washington, D. C. 20031 Phone 423-1423

EACH PATIENT
is precisely measured for a Jobst support.

Jobst venous pressure gradient supports are custom-made from precise measurements of your patient's extremity. Each support is individually engineered to exert the correct counter pressure according to your diagnosis and each support is guaranteed to fit, no strangulation, no puddling, no tourniqueting. Our service center is staffed with experts who will measure and fit your patient on your prescription only.

There is no charge for this service. Here is an advanced, clinically proved program of treatment for vascular deficiencies. For prescription blanks and medical reprints, have your secretary phone or drop us a card. Jobst Service Center 818 Eighteenth St. N.W. Phone: 298-5530 Washington, D. C. 20006

©1966 Jobst

ANNOUNCING a potent combination in truly delicious orange-flavored forms:

ERYTHROCIN®-SULFAS

ERYTHROMYCIN ETHYL SUCCINATE–TRISULFAPYRIMIDINES

in chewable tablets

in granules for oral suspension

When combination antibiotic therapy is indicated...

CONSIDER: an exceptionally high cure rate in susceptible infections

The rationale: When combined, Erythrocin and the trisulfapyrimidines (triple sulfas) are indicated in infections that are more susceptible to the combination than to either agent alone. Such conditions are usually found in urinary, lower respiratory tract and chronic ear conditions.

The results: Clinical studies involving 142 young patients showed *an overall cure rate of 96.5%*. Side effects were experienced by only four of the patients.

The acceptance: The majority of the 142 patients studied expressed a definite liking for the products. *There were only two refusals.* An independent taste-test with 50 healthy children further substantiated the excellent acceptability of the orange-flavored forms.

602061

ERYTHROCIN®-SULFAS

ERYTHROMYCIN ETHYL SUCCINATE—TRISULFAPYRIMIDINES

In Chewable Tablets

In Granules for Oral Suspension

ERYTHROCIN · Sulfas
Chewable
ERYTHROCIN · Sulfas
Granules

ERYTHROCIN®-SULFAS
Brief Summary

Indications: Use Erythrocin-Sulfas in infections more susceptible to the combination than to either agent alone. These are usually found in urinary, lower respiratory tract, and chronic ear infections.

Contraindications: Known sensitivity to erythromycin or sulfonamides. Because of the possibility of kernicterus with sulfonamides, do not use in pregnancy at term, premature or new born infants.

Warnings: As with other forms of sulfonamide therapy, carefully evaluate patients with liver or kidney damage, urinary obstruction, or blood dyscrasia. Deaths have been reported from hypersensitivity reactions and blood dyscrasias following use of sulfonamides. Perform blood counts and liver and kidney function tests if used repeatedly at close intervals or for long periods.

Precautions: Use sulfonamides with caution in patients with a history of allergy. Assure adequate fluid intake to prevent crystalluria and institute alkali therapy if indicated.

Adverse Reactions: Sulfonamide therapy may be associated with headache, nausea, vomiting, urticaria, diarrhea, hepatitis, pancreatitis, blood dyscrasias, neuropathy, drug fever, skin rash, injection of the conjunctiva and sclera, petechiae, purpura, hematuria and crystalluria.

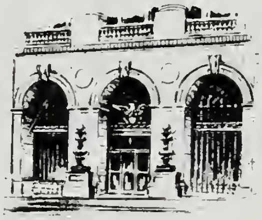
Side effects due to erythromycin are infrequent, but occasional abdominal discomfort, nausea, or vomiting, urticaria and other skin rashes may occur.

If a reaction or overgrowth of nonsusceptible organisms occurs, withdraw the drug.

Supplied: The Granules for Oral Suspension come in bottles of 60 ml. and 150 ml. The Chewable tablets are in bottles of 50. Each 5-ml. teaspoonful of reconstituted Granules or each Chewable tablet provides erythromycin ethyl succinate equivalent to 125 mg. of erythromycin activity and 167 mg. each of sulfadiazine, sulfamerazine and sulfamethazine. 603303

ABBOTT

Complete
Investment
Service



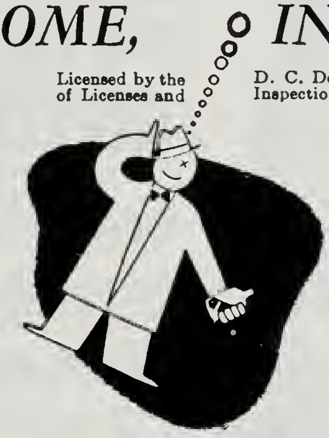
FERRIS & COMPANY
Members New York Stock Exchange
611 15th St., N.W. STerling 3-8222

In the Chevy Chase Area
FOR THE BEST IN DRUGS AND SERVICE
IT'S
HIGGER'S
ESTABLISHED 1930

Complete Biological Stocks
HIGGER'S DRUGS, INC.
5015-17-19 Connecticut Avenue
Phone: Woodley 6-1815
Note: Special physicians' phone to Prescription Department: Woodley 6-5555

KALORAMA CONVALESCENT HOME, INC.

Licensed by the D. C. Department of Licenses and Inspections



INSTITUTIONAL CARE
for the medical management of
the acute stages of alcoholism.

2001 KALORAMA ROAD
at 20th Street, N.W. Adams 2-0063

Serving the Doctors of Metropolitan Washington
Since 1942

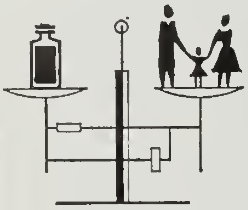
PROFESSIONAL BUSINESS MANAGEMENT, INC.

JOHN C. POST, *President*

A PERSONAL SERVICE DESIGNED TO ASSIST THE DOCTOR WITH THE BUSINESS SIDE OF MEDICAL PRACTICE.

• ***Medical Management Specialists*** •

1012 20th Street, N.W Washington, D.C. 20036 Tel. FEderal 8-3200



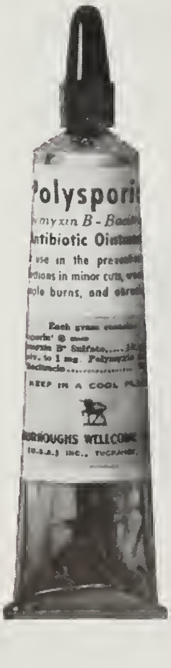
THE BLOOD SERVICE PLAN *of the*

Metropolitan Washington Blood Banks, Inc.
A Nonprofit Organization

Member of American Association of Blood Banks

For information telephone 638-2205

Suite 500, 915 19th Street, N.W. T. A. Loosbrock, Executive Director



in treating topical infections, no need to sensitize the patient

USE 'POLYSPORIN'® brand
POLYMYXIN B-BACITRACIN
ANTIBIOTIC OINTMENT

broad-spectrum antibiotic therapy with minimum risk of sensitization

Caution: As with other antibiotic products, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs. **Contraindication:** This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.
Supplied: In ½ oz. and 1 oz. tubes
Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

"All the Comforts of Home"..

POST OPERATIVE
MEDICAL
CONVALESCENT
DIABETIC
PARALYTIC
INVALID
AGED
CHRONIC
AMBULATORY
RETIRED
GUESTS, ETC.

AN ULTRA-MODERN HOME IN THE SUBURBS ON TEN ACRES
WITH A COUNTRY ATMOSPHERE

KENSINGTON GARDENS SANITARIUM

★ A MEDICAL INSTITUTION UNDER THE SUPERVISION OF REGISTERED NURSES ★
LICENSED BY STATE AND COUNTY

3000 McComas Avenue
Kensington, Maryland

- Rehabilitation Facilities
- Private and Semi-Private Rooms with Connecting Baths
- Beautifully Decorated
- Television in Spacious Lounges
- Large Porches
- Lovely Lawns and Shade Trees
- Supervised Diets
- Patients May Retain Their Own Physician
- 24-Hour Nursing Care
- Reasonable Rates
- Recreation and Physical Therapy

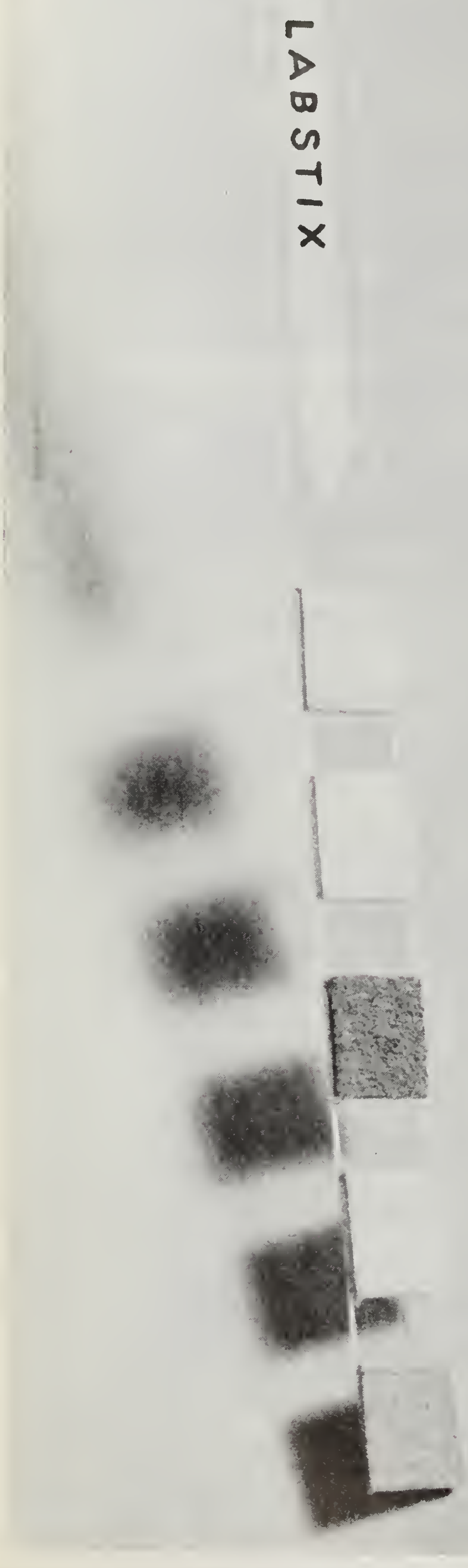
MEMBER OF

MEMBER
AND MARYLAND NURSING HOME ASSOCIATION
ACCREDITED BY THE NATIONAL COUNCIL
FOR THE ACCREDITATION OF NURSING HOMES

For Further Information Phone

933-0060 or 933-0872

Proprietors-Administrators
LILLIAN H. and
GEORGE L. BRICKER



new from Ames 5 basic uro-analytical facts in 30 seconds

Labstix®

BRAND REAGENT STRIPS

...broadest urine screening possible from a single reagent strip

Urine test results with LABSTIX Reagent Strips can represent significant guides to differential diagnosis or therapy in many conditions. An unexpected "positive" may enable you to detect hidden pathology—long before more recognizable symptoms become evident. Negative results, which permit you to rule out abnormalities in a broad clinical range, can serve as baseline values for reference in future examinations. The 5 colorimetric test areas encompassed on LABSTIX Reagent Strips are:

pH—values are read numerically in the essential range of pH 5 to pH 9.

Protein—results are read either in the "plus" system or in mg. % in amounts approximating "trace," 30, 100, 300, and over 1000 mg. %.

Glucose—provides a "Yes-or-No" answer for urine "sugar spill."

Ketones—detects ketone bodies in urine—**both** acetoacetic acid and acetone. Reacts with as little as 5 to 10 mg. % of acetoacetic acid.

Occult Blood—specific test for intact red cells, hemoglobin or myoglobin. Results are read as negative, small, moderate or large amounts.

Now a Clear Reagent Strip of Firm Construction

...facilitates handling during testing procedure. Excellent color contrast made possible by the clear plastic strip, together with the clearly defined color charts provided, permits precise, reproducible colorimetric readings in all 5 test areas. A more definitive interpretation of uro-analytical facts is made possible.

Available: LABSTIX Reagent Strips, bottles of 100 (color charts are supplied with each bottle).

Ames Company, Inc., Elkhart, Indiana AMES

08165

NATIONAL AND REGIONAL MEETINGS

June 25: American Association for the Study of Headache. Conrad Hilton Hotel, Chicago. Address: Dr. Seymour Diamond, *Secretary*, 5214 North Western Avenue, Chicago, Ill. 60625.

June 25: Seminar on Medicare Regulations. Palmer House, Chicago. Address: Dr. Richard F. Manegold, AMA Department of Hospitals and Medical Facilities, 535 North Dearborn Street, Chicago, Ill. 60610.

June 25–26: American Diabetes Association. LaSalle Hotel, Chicago. Address: Mr. J. Richard Connelly, *Executive Director*, 18 East 48th Street, New York, N. Y. 10017.

June 26–30: American Medical Association. Palmer House, Chicago. Address: Dr. F. J. L. Blasingame, *Executive Vice President*, 535 North Dearborn Street, Chicago, Ill. 60610.

July 9–15: Medical Women's International Congress. Rochester, N. Y. Address: Mrs. Gertrude F. Conroy, *Executive Director*, 1790 Broadway, New York, N. Y. 10019.

August 8–12: 71st Annual Session of National Medical Association. Pick-Congress Hotel, Chicago. Address: Dr. John T. Givens, *Executive Secretary*, 2400 Corprew Avenue, Norfolk, Va.

August 12–14: International Doctors in Alcoholics Anonymous. Speedway Motel, Indianapolis, Ind. Address: Convention Committee, 5842 North LaSalle Avenue, Indianapolis, Ind.

August 25–27: West Virginia State Medical Association. The Greenbrier, White Sulphur Springs, West Va. Address: Mr. William H. Lively, *Executive Secretary*, 401 Atlas Bldg., 1031 Quarrier Street, Charleston, West Va. 25324.

September 8–10: American Association of Obstetricians and Gynecologists. The Homestead, Hot Springs, Va. Address: Dr. Robert B. Wilson, *Executive Secretary*, 200 First Street, S.W., Rochester, Minn. 55902.

September 9: Medical and Chirurgical Faculty of the State of Maryland. Ocean City, Md. Address: Mr. John Sargeant, *Executive Secretary*, 1211 Cathedral Street, Baltimore, Md. 21201.

September 11–12: Congress on Medical Socio-Economics. Palmer House, Chicago. Address: Dr. Charles Edwards, Department of Socio-Economic Activities, AMA, 535 North Dearborn Street, Chicago, Ill. 60610.

September 16–24: American Society of Clinical Pathologists. Washington Hilton Hotel, Washington. Address: Miss Martha Damron, Administrative Secretary, 445 North Lake Shore Drive, Chicago, Ill. 60611.

September 17–23: College of American Pathologists. Washington Hilton Hotel, Washington. Address: Mr. Oliver J. Neibel, Jr., Administrative Secretary, 230 North Michigan Avenue, Chicago, Ill. 60601.

September 25–30: III International Congress of Nephrology. Washington Hilton Hotel, Washington. Address: Secretariat, III International Congress of Nephrology, 9650 Wisconsin Avenue, Washington, D. C. 20014.

September 29–October 2: American Medical Writers' Association. Waldorf Astoria, New York. Address: Mr. James E. Bryan, *Executive Director*, 2000 P Street, N.W., Washington, D. C. 20036.

The discomforts of

DIARRHEA
MUCOUS COLITIS
DIVERTICULITIS
SPASTIC URETERITIS
BLADDER SPASM

are relieved by
direct musculotropic action
with.....

Trocinate®
BRAND THIPHENAMIL HCl

Available in 100 milligram pink sugar-coated tablets.

The high therapeutic index permits dosage sufficient to relieve spasm promptly. The usual initial dose is 4 tablets. Maintenance dosage is usually one or two tablets 4 times a day.

Trocinate *BRAND* THIPHENAMIL HCl
BETA DIETHYLAMINOETHYL DIPHENYLTHIOACETATE HYDROCHLORIDE

Directly relaxes smooth muscle spasm
Combats hypermotility
Non-mydriatic, may be used in glaucoma

Trocinate (Thiphenamil HCl) has been found in three clinical studies, (J. Mo. Med. Assoc., 48:685-6; Med. Rec. & Annals, 43:1104-6; J. Urol., 73:487-93), to be effective and to be virtually free of side-effects. Fifteen years of wide clinical usage has affirmed the safety and effectiveness of Trocinate.

DISPENSED IN BOTTLES OF
100, 250 AND 2000 TABLETS

Literature and samples sent upon request

WM. P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA
Manufacturers of ethical pharmaceuticals since 1856

PHYSICIANS' PLACEMENT SERVICE

THE MEDICAL SOCIETY'S **Physicians' Placement Committee** maintains a service to benefit its members and other physicians by locating suitable openings, assistants or associates. It will also assist Government agencies and industrial organizations to secure physicians for their Medical Departments. Call 223-2230—ask for Mr. Trust.

THE GIBSON COMPANY

60 years serving the medical profession

922 19th Street, N.W.
Federal 8-2688

Medical and Surgical Supplies
Hospital, Invalid and Sickroom Supplies
Surgical Fitting Specialists—Man and Woman
Private Fitting Rooms

Surgical Supplies and Equipment

Complete Fitting Service for Ladies and Men

NELSON KLOMAN SURGICAL SUPPLY CO.
1018 - 18th Street, N.W.
Washington 36, D. C.

Telephone: FEderal 8-5245

BEUCHLER'S
915-19th Street, N.W. Republic 7-6006

Coke
Coca-Cola

11:47 pm 11:53 pm 12:06 am

The meaningful pause. The energy it gives. The bright little lift. Coca-Cola with its never too sweet taste, refreshes best. Helps people meet the stress of the busy hours. This is why we say things go better with Coke
TRADE-MARK ®

interests in oil exploration

Prudential Oil Corporation
$5,000,000
1966 Annual Drilling Fund
Series Twelve
•
500 Units
•
$10,000 Per Unit

Ask your broker or mail the coupon for a Prospectus as effective with the S.E.C.

S

Name__________

Address__________

City__________State______Zip______

NOTE: This is neither an offer to sell nor a solicitation to buy any of these securities. Offering is made only by Prospectus, copies of which may be obtained in any State from the undersigned or brokers as may lawfully offer the securities in that State.

PRUDENTIAL OIL CORPORATION
ONE ROCKEFELLER PLAZA, NEW YORK, N.Y. 10020

MAXWELL
AND
TENNYSON
INC.
PHARMACISTS

"Where Pharmacy is a Profession"

M+T

Washington, D. C.

1801 Eye Street NAtional 8-0206
1835 Eye Street STerling 3-0360
1726 Eye Street 298-6540

Prescriptions called for and delivered without extra charge

Biologicals–Vaccines
Serums
Hypo-Allergenic Cosmetics

OXYGEN
24-HOUR SERVICE
363–9595

I P P B
COMPRESSORS
OXYGEN
SALES
RENTALS

Inhalation Therapist on Duty
EM 3–9595

ACCREDITED SURGICAL CO.
Medical and Surgical Supplies
3226 Wisconsin Ave., N.W.

ESTABLISHED 1873

WOMEN ASSISTANTS

In Washington and Suburbs

CALL COLUMBIA 5-7023
(*Six Trunk Lines*)

The S. H. Hines Company

Funeral Home

2901-03-05-07 FOURTEENTH STREET N.W
Northeast corner Harvard and 14th Streets

W. R. FRANK HINES
President and General Manager

MODERN AIR-CONDITIONED ROOMS WITH CHAPEL, PIPE ORGAN AND REPOSING ROOMS ARRANGED TO MEET EVERY REQUIREMENT AT NO ADDITIONAL CHARGE. CREMATIONS.

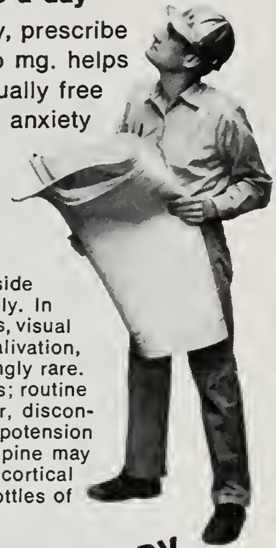
No forfeiture of VETERAN'S BURIAL ALLOWANCE
THE EXPENSE IS A MATTER OF YOUR OWN DESIRE

No Branch Establishments
Convenient parking facilities adjoining Funeral Home

Blueprint for dealing with tension due to stress—Prolixin—once-a-day

For the patient who must be on the job mentally as well as physically, prescribe Prolixin. The prolonged tranquilizing action of as little as one or two mg. helps him cope with tension all day long. Markedly low in toxicity and virtually free from usual sedative effects, Prolixin is effective in controlling both anxiety associated with somatic disorders and anxiety due to environmental or emotional stress. Patient acceptance is good—because Prolixin is low in cost, low in dosage and low in sedative activity. Prescribe Prolixin.

Side Effects, Precautions, Contraindications: As used for anxiety and tension, side effects are unlikely. Reversible extrapyramidal reactions may develop occasionally. In higher doses for psychotic disorders, patients may experience excessive drowsiness, visual blurring, dizziness, insomnia (rare), allergic skin reactions, nausea, anorexia, salivation, edema, perspiration, dry mouth, polyuria, hypotension. Jaundice has been exceedingly rare. Photosensitivity has not been reported. Blood dyscrasias occur with phenothiazines; routine blood counts are recommended. If symptoms of upper respiratory infection occur, discontinue the drug and institute appropriate treatment. Do not use epinephrine for hypotension which may appear in patients on large doses undergoing surgery. Effects of atropine may be potentiated. Do not use with high doses of hypnotics or in patients with subcortical brain damage. Use cautiously in convulsive disorders. **Available:** 1 mg. tablets. Bottles of 50 and 500. For full information, see Product Brief.



WHEN TRANQUILIZATION WITHOUT SEDATION IS DESIRABLE, TRY

PROLIXIN®

THE SQUIBB TRANQUILIZER

SQUIBB FLUPHENAZINE HYDROCHLORIDE

SQUIBB

Squibb Quality – the Priceless Ingredient

Who says nobody appreciates your sacrifices?

"Medicine is a glamorous profession."

"Medicine is a glamorous profession. Doctors are just in it for the money." Sure they are. That's why they go to college for eight years. Study half the night. Live on peanuts (almost literally) while they spend more years interning. And studying some more. Then they start practicing. And remember, they're not handed a practice on a silver platter, either. Then there's equipment to buy. Lots of it. *Expensive* equipment. Then when they do build up a practice, think of the hours. On call 24 hours a day, 365 days a year. So you think it's a glamorous profession? And that doctors are just in it for the money? We'd like to ask you that some morning, about 3:30 A.M. maybe, after your wife had just had a baby. Or some day after your son had fallen out of a tree. Or you had to be helped ... fast. Sure, it's a glamorous profession, alright. We at Peoples are proud to be working so closely with the dedicated doctors we serve. And we're always ready to serve you too ... courteously, efficiently, professionally.

Photographed in the George Washington Hospital

ALL PEOPLES DRUG STORES FILLED 6,321,215 PRESCRIPTIONS IN 1964 ... A MEASURE OF THE TRUST PEOPLE HAVE IN PEOPLES!

PEOPLES
PRESCRIPTION DRUG STORES

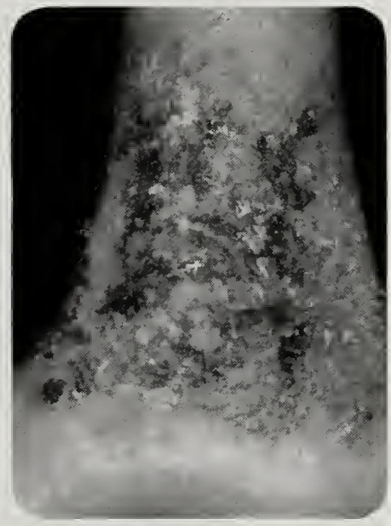
Number 3 of a series published in Washington, D.C. newspapers

Just in case you think you aren't appreciated—read a Peoples advertisement sometime! Here, we reminded people of your years of study, of your dedication, of your untiring efforts. And yes, we have to admit it—we did have one small sentence in that ad that patted Peoples on the back!

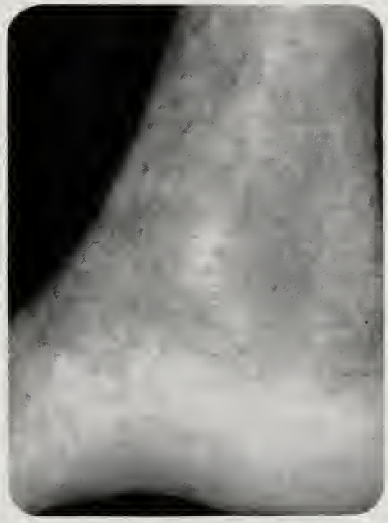
PEOPLES PRESCRIPTION DRUG STORES

ALL PEOPLES DRUG STORES FILLED OVER 7 MILLION PRESCRIPTIONS IN 1965 • A MEASURE OF THE TRUST PEOPLE HAVE IN PEOPLES

eczema: scourge of childhood



R. R., Age 11—Before treatment—
atopic eczema of long standing



After treatment—with ARISTOCORT
Topical Ointment 0.1% for two weeks

ARISTOCORT® Triamcinolone Acetonide Topicals have proved exceptionally effective in the control of various forms of childhood eczema: allergic, atopic, nummular, psoriatic, and mycotic.

In most cases responsive to topical ARISTOCORT, the 0.1% concentration is sufficiently potent. The 0.5% concentration provides enhanced topical activity for patients requiring additional potency for proper relief.

Administration and Dosage: Apply sparingly to the affected area 3 or 4 times daily. Some cases of psoriasis may be more effectively treated if the 0.1% Cream or Ointment is applied under an occlusive dressing.

Contraindications: Tuberculosis of the skin, herpes simplex, chicken pox and vaccinia.

Precautions and Side Effects: Do not use in the eyes or in the ear (if drum is perforated). A few individuals react unfavorably under certain conditions. If side effects are encountered, the drug should be discontinued and appropriate measures taken. Use on infected areas should be attended with caution and observation, bearing in mind the potential spreading of infection and the advisability of discontinuing therapy and/or initiating antibacterial measures. Generalized dermatological conditions may require systemic corticosteroid therapy. Steroid therapy, although responsible for remissions of dermatoses, especially of allergic origin cannot be expected to prevent recurrence. The use over extensive body areas, with or without occlusive nonpermeable dressings, may result in systemic absorption. Appropriate precautions should be taken. When occlusive nonpermeable dressings are used, miliaria, folliculitis and pyodermas will sometimes develop. Localized atrophy and striae have been reported with the use of steroids by the occlusive technique. When occlusive nonpermeable dressings are used, the physician should be aware of the hazards of suffocation and flammability. The safety of use on pregnant patients has not been firmly established. Thus, do not use in large amounts or for long periods of time on pregnant patients.

Packages: Tubes of 5 Gm. and 15 Gm.; ½ lb. jar.

PHOTOGRAPHS COURTESY OF M. M. NIERMAN, M.D.

Aristocort® Topical Ointment 0.1% and Cream 0.1%, 0.5%
Triamcinolone Acetonide
Also available in foam form and with neomycin.

Lederle LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York

618-6

CLASSIFIED ADVERTISEMENTS

Advertisements under the following headings are charged at the rate of **$5.00** for one insertion of 50 words or less; **$4.00** each for three insertions; and **$3.00** each for six insertions or more. All advertisements are payable in advance; the Editorial Board reserves the right to edit copy. Closing date for new copy, 15th of month preceding date of issue.

Classified advertisements of a professional nature are free to members.

SITUATIONS WANTED

PATHOLOGIST, Board-certified (PA), age 33, seeks position in Washington or environs. Research experience; University-trained; publications. Interested in providing small hospital coverage or part-time association with established pathologist. Address Box 60, 2007 Eye Street, N.W., Washington, D.C. 20006.

INTERNIST, 2 years hematology, age 33, military service completed, desires association or group practice opportunity in Washington, D.C. area beginning July 1966. Address Box 98, 2007 Eye Street, N.W., Washington, D.C. 20006.

INTERNIST, Board-eligible, available for part-time assistance with practice in office or house calls. Address Box 92, 2007 Eye Street, N.W., Washington, D.C. 20006.

PHYSICIANS WANTED

HOUSE OFFICERS: All positions in 380-bed Community Hospital. ECFMG necessary. Excellent salary. Contact Medical Director, THE MORRIS CAFRITZ MEMORIAL HOSPITAL, 1310 Southern Avenue, S.E., Washington, D.C. 20032.

REAL ESTATE

FOR SALE: Attractive home-office in excellent location in Prince George's County. Corner lot with office entrance from off-street parking lot. Residence on street level. Bus stop at door. Ideal for general practitioner. Very favorable financing possible. Telephone Harrison 2-7748.

OFFICE SPACE WANTED

INTERNIST desires to share office space in downtown Washington. Telephone 365-5590.

OFFICE SPACE AVAILABLE

TO SHARE: Excellent opportunity for young physician beginning practice as GP or internist. Wheaton area; fully equipped offices. Telephone 593-3543 after 6 p.m.

FOR RENT: PARKWOOD MEDICAL BUILDING, 1746 K Street, N.W.: office suite, approximately 500 sq. ft. Ideal for dentist, internist or podiatrist. Switchboard service. Rental below average area rental for same space. Telephone 296-4100, Suite 42.

FOR RENT: Office space ideally located at corner of 5500 Colorado Avenue, N.W. Approximately 1,200 sq. ft., newly remodeled, divided into 3 offices with each containing reception room, office, consultation and examining rooms. Air-conditioned. Reasonable rent. Telephone MR. FRANK BUAS, Randolph 3-6000.

FOR LEASE GRESHAM MEDICAL OFFICES, 2833 Georgia Avenue, N.W., adjacent to Howard University campus. Very desirable 4-room suite with private lavatory and use of spacious reception foyer. Modern facilities; air-conditioned offices. Rental $195 month plus electricity. Contact CHARLES M. SCHNEIDER, Realtor, 922 15th Street, N.W., telephone 347-1679.

"Cappy"

INTRODUCES THE WASHINGTON AREA SPECIALISTS *in collections for Professionals*

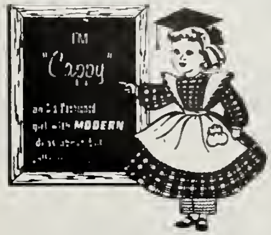
Unless We Collect, There Is No Charge

We offer a complete collection service to bring about prompt payments in a dignified, diplomatic manner for those lacking adequate facilities for enforced collections.

'PHONE 882-2000

CAPITAL CREDIT CORP.

7600 GEORGIA AVENUE, N.W. WASHINGTON 12, D.C.



Classified Advertisements (*Continued*)

FOR LEASE: 4900 BUILDING on Indian Head Highway, Oxon Hill, Prince George's County, Md., in center of densely populated Glassmanor, Eastover, and Forest Heights areas. First and second floor space for immediate occupancy; new, air-conditioned building; private parking for 55 cars. Telephone GEO. S. KING CO., LU 4-2501.

FOR RENT: Premium office space; excellent location, 1 minute from Holy Cross Hospital in one of busiest traffic areas in town. Suite can be designed to specifications. For details inquire of DR. MILTON M. KOGAN, Juniper 5-3290.

TO SHARE: In NORTH BETHESDA MEDICAL PARK: very attractive offer, especially for young physician just beginning practice. Ample free parking. Address Box 32, 2007 Eye Street, N.W., Washington, D.C. 20007.

TO SHARE: Surgeon at 1150 Connecticut Avenue wishes to share office space. Separate consultation and examining rooms. Telephone Metropolitan 8-0387.

FOR RENT: NEW MEDICAL BUILDING, 1726 Eye Street, N.W. Ideal space available for general practitioner or specialist. Large suite for dentist also available. All utilities included plus switchboard service and central air-conditioning; parking available. Telephone 298-6936.

Physicians—

ATTENTION!

Are you missing out?

BOULEVARD MEDICAL CENTER

8301 Arlington Blvd. (Rte. 50)

—Just west of Gallows Road

—Just west of Rte. 495

—Adjacent to Fairfax Hospital

In the heart of Northern Virginia's "hottest" growth area!

Leasing information:

MR. APPEL, 527-6660

POMPONIO PROPERTIES, INC.

"Registered Nurses—For Private Duty"

U. S. EMPLOYMENT SERVICE

PROFESSIONAL OFFICE

GRADUATE NURSES REGISTRY

SOLAR BUILDING
1000 16th St., N.W.—Room 705
WASHINGTON, D. C. 20212

CALL—DISTRICT 7-1129

24-hour telephone service—
7 days a week

NURSES REGISTRY

EXPERIENCED UNDERGRADUATE
& PRACTICAL NURSES

Recommended by Physicians
At Your Service for Day or Night Duty
in Washington and nearby area

CALL—RAndolph 6-6706

VISIT THESE
CONVENIENT RESIDENTIAL
COMMUNITIES FOR EXECUTIVES
AND PROFESSIONALS

built and sold by Gruver & Cooley area builders for over 50 years

in Maryland:

Walnut Woods . . . take 70-S to Montrose Rd., right one block to Hitching Post Lane, right to Old Stage Rd., then right on Old Stage. Priced from $45,000.

Luxmanor . . . Take Old Georgetown Rd. north from 70-S for two blocks to New Lux Lane, turn left and follow the Luxmanor sign to Stephalee Lane. Priced from $58,000.

in Virginia:

Greenway Heights . . . from Beltway Exit 13 take Route 193 West for 2 miles to entrance on left, across from Madeira School. Priced from $52,000.

all open daily until dark

Gruver & Cooley
BUILDERS

5301 Wisconsin Ave., N.W. KE 7-1120
evenings and weekends call Mr. Stoner, EM 5-0867

"It's a pleasure to save at the Half-Billion-Dollar Perpetual!"

"Size isn't everything . . . but it *is* nice to stand in the beautiful, spacious lobby of the big Perpetual and know I'm a shareholder! You see I've made it a habit to save *regularly* and the most practical time is on pay day . . . I just walk right over to Perpetual on my lunch hour. Perhaps you would find it more convenient to make your "savings date" on the first of the month . . . but surely by the 20th in order to receive a dividend for the full month. My savings—and yours—are *safe* at Perpetual. And your money earns steady, consistent dividends, credited quarterly."

PERPETUAL
BUILDING ASSOCIATION
Edward C. Baltz, President

ASSETS OVER $500,000,000 • ESTABLISHED 1881

DOWNTOWN............*11th & E Streets, Northwest*
ANACOSTIA..................*1340 Good Hope Road*
BETHESDA-CHEVY CHASE.. *7401 Wisconsin Avenue*
MIDTOWN...............*888 17th Street, Northwest*
DISTRICT HEIGHTS............*7118 Marlboro Pike*
SILVER SPRING.............. *8700 Georgia Avenue*
PRINCE GEORGES *East-West Hgwy. at Belcrest Road*

FEDERAL SAVINGS AND LOAN INSURANCE CORPORATION
SAFETY OF YOUR SAVINGS
INSURED
UP TO $10,000

FEDERAL HOME LOAN BANK SYSTEM
MEMBER

INDEX OF ADVERTISERS

These Advertisers Support Your Journal.
Please Give Them Your Support.

Page

Bank
Riggs National Bank . . . 4

Beverages
Coca-Cola Company . . . 42

Blood Service
Metropolitan Washington Blood Banks . . . 38

Building & Loan Associations
National Permanent Savings & Loan Association . . . 8
Perpetual Building Association . . . 50

Business Counseling
Professional Business Management . . . 38

Collection Agencies
Capital Credit Corporation . . . 48
Credit Bureau . . . 5

Dietetic Products
Loma Linda Foods . . . 11
Sealtest Foods . . . T-346

Equipment & Supplies
Accredited Surgical Sales . . . 43
Beuchler's, Inc. . . . 42
Gibson Company . . . 42
Jobst Institute, Inc. . . . 34
Nelson Kloman Surgical Supply Company . . . 42

Funeral Home
S. H. Hines & Company . . . 44

Home Builders
Gruver & Cooley . . . 49

Insurance
Mutual of Omaha . . . 3-C
Russell, Marsh & Kennedy, Inc. . . . 6

Investment Planning
Ferris & Company . . . 37

Investments
Prudential Oil Corporation . . . 43

Page

Nurse Registries
Association of Undergraduate and Practical Nurses Registry . . . 49
Capital Nurse Registry . . . T-350
U. S. Employment Service for D. C. . . . 49

Nutrition Education
Dairy Council of Greater Metropolitan Washington, D. C. . . . 17

Office Space
Federal Building . . . 24
GA-LA Corporation . . . 34
Highland House . . . 30
Pomponio Properties, Inc. . . . 49
Shannon & Luchs . . . 12

Pharmaceuticals
Abbott Laboratories . . . 35–37
Ames Company . . . 40
Armour Pharmaceutical Company . . . T-333–334
Bristol Laboratories . . . 10
Burroughs Wellcome & Company . . . 38
Burton Parsons and Company . . . T-340
Dorsey Laboratories . . . 19–22
Hynson, Westcott & Dunning, Inc. . . . 3
Lakeside Laboratories, Inc. T-345, 347, 349; 27, 29, 31, 32, 33
Lederle Laboratories . . . T-332; 8–9, 13, 47
Eli Lilly & Company . . . 26
Merck, Sharp & Dohme, Division of Merck & Co., Inc. . . . 18
Parke Davis & Company . . . 2-C
Pfizer Laboratories . . . 14–16
Philips Roxane Laboratories . . . 53–54
Wm. P. Poythress & Company . . . 41
Roche Laboratories . . . 4-C
G. D. Searle & Company . . . T-328–329
Smith, Kline & French Laboratories . . . 25
E. R. Squibb & Sons . . . 45
Wallace Laboratories . . . T-338; 7
Winthrop Laboratories . . . 52

Pharmacies
Higger's Drugs . . . 37
Maxwell & Tennyson . . . 43
Peoples Drug Stores . . . 46

Sanitariums
Kalorama Convalescent Home . . . 37
Kensington Gardens Sanitarium . . . 39

T–text

NTz Nasal Spray relieves hay fever symptoms on contact

Fast symptomatic relief from seasonal hay fever comes in the convenient NTz Nasal Spray bottle. Two sprays quickly relieve itching and decongest the nasal membranes on contact. The first spray of NTz shrinks the turbinates, helps restore normal nasal ventilation and breathing. After a few minutes a second spray enhances sinus ventilation and drainage.

NTz Nasal Spray reduces excessive rhinorrhea without unpleasant dryness. It is well tolerated by delicate respiratory tissues. NTz also provides relief in head colds, perennial rhinitis and sinusitis.

NTz's carefully balanced formula relieves three ways: with a decongestant, a topical antihistamine, and an antiseptic wetting agent.

Neo-Synephrine® HCl 0.5%, a decongestant of unexcelled efficacy to shrink nasal membranes.

Thenfadil® HCl 0.1%, a topical antihistamine to help relieve itching.

Zephiran® Cl 1:5000, an antiseptic wetting agent to promote the rapid spread of components to less accessible nasal areas.

NTz is supplied in leakproof, pocket-size, spray bottles of 20 ml. and in bottles of 30 ml. with dropper.

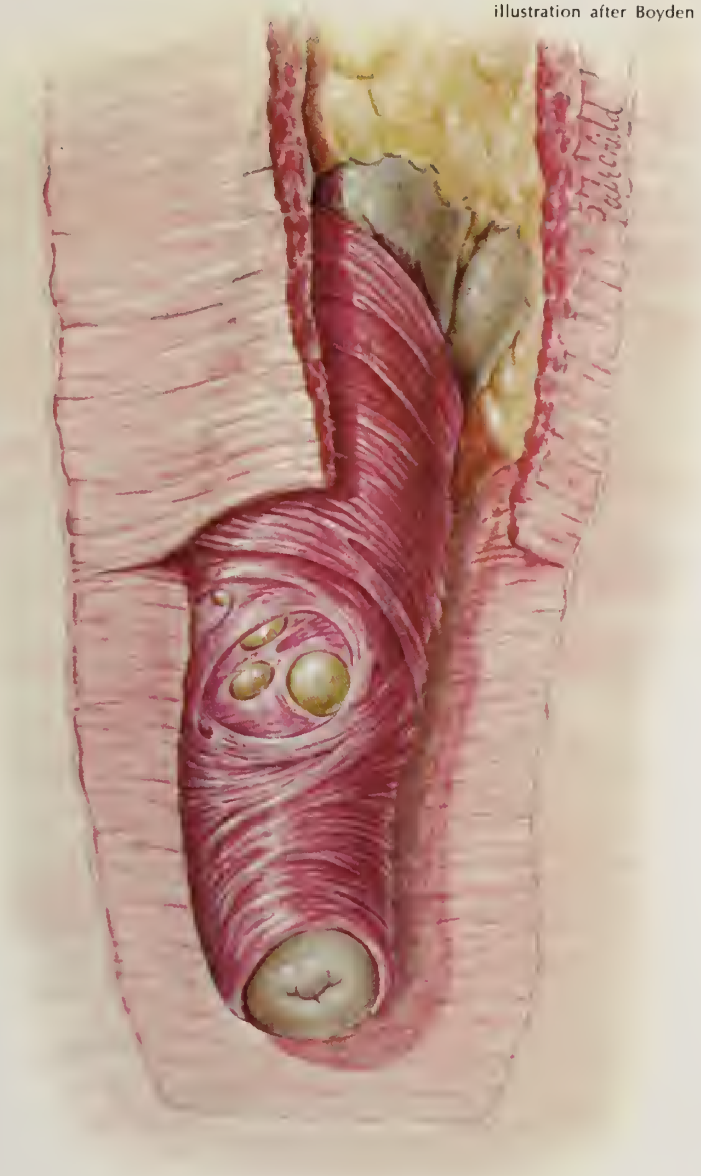
Winthrop Laboratories, New York, N. Y. 10016

NTz, Neo-Synephrine (brand of phenylephrine), Thenfadil (brand of thenyldiamine), and Zephiran (brand of benzalkonium, as chloride, refined), trademarks reg. U.S. Pat. Off.

Hay fever…
a summer hazard
prescribe
NTz® Nasal Spray

Winthrop

illustration after Boyden



HOW IMPORTANT IS THIS
IN YOUR DIAGNOSES OF SMOOTH MUSCLE SPASM?

PERHAPS VERY IMPORTANT

The sphincter of Oddi is made up primarily of smooth muscle fibers. It permits the gall bladder to fill, regulates the flow of bile and pancreatic enzymes and in dysfunction is a primary cause of Biliary Dyskinesia. The sphincter of Oddi is but one of five major foci of smooth muscle spasm where SPACOLIN® (Alverine citrate) acts directly with rapid onset and long duration. No neurotropic side effects because Spacolin is a musculotropic counter-spasmodic unrelated to atropine or atropine-like drugs. Spacolin is not contraindicated in prostatic hypertrophy.

SPACOLIN® (Alverine citrate)

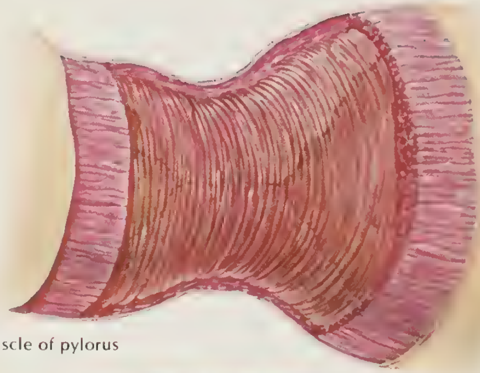
Each tablet contains: Alverine citrate . . . . 120 mg.

INDICATIONS: Smooth muscle spasmolytic for use in spastic colon, spastic conditions of the gastrointestinal tract, biliary dyskinesia, cholecystitis, spasm associated with peptic ulcer,* achalasia, pylorospasm, spasm attendant to diarrhea, spastic conditions of the genitourinary tract attributable to inflammation and calculi, certain primary dysmenorrheas and as an aid in cystoscopic, esophagoscopic and gastroscopic examinations. DOSAGE: One tablet after meals 1 to 3 times daily at discretion of physician. When treating spasm associated with peptic ulcer, achalasia or pylorospasm, administer tablets 1/2 hour before meals. In dysmenorrhea, one tablet 3 times daily starting at onset of discomfort. PRECAUTION: Caution is recommended when using in hypotensive patients. SIDE EFFECTS: In common with other smooth muscle depressants, Spacolin temporarily lowers blood pressure.

*Antacid and dietary measures are of primary importance in ulcer treatment and should not be neglected.

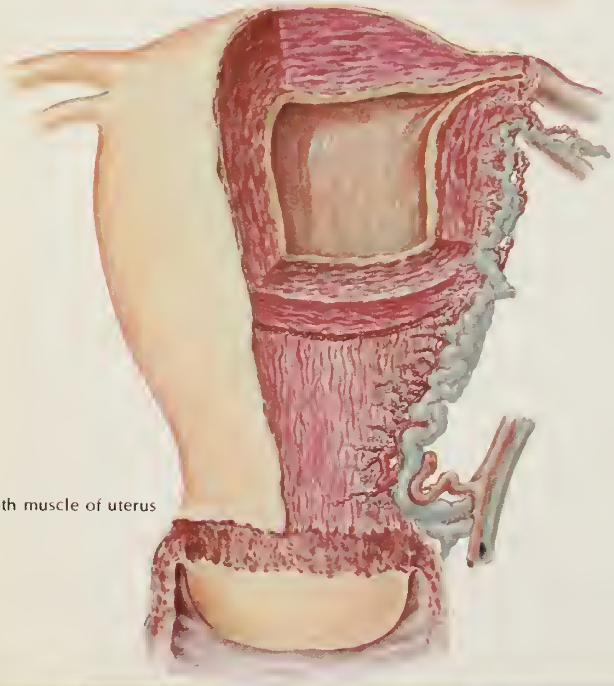
PHILIPS ROXANE LABORATORIES Division of Philips Roxane, Inc.,
Columbus, Ohio

smooth muscle sphincter of Oddi



smooth muscle of pylorus

smooth muscle of colon



smooth muscle of uterus

smooth muscle of urinary bladder

MEMO FROM . . .

to :

DR. "A"*
Administrator, Income Protection Plan,
Medical Society of the District of Columbia

"Thank you for relieving me of a financial burden"

Dr. "A", Washington, D.C., was mighty thankful he had the Medical Society's Income Protection Plan when he was disabled recently by an accident.

Mutual of Omaha, underwriter of the plan, sent Dr. "A" a check for $2,562.60, paying him benefits under his Medical Society coverage as well as the supplementary coverage he has had with Mutual of Omaha since 1932.

All told, Mutual of Omaha has paid Dr. "A" a total of $8,003.38 in benefits since 1955. These checks, covering three separate disabilities, have helped him meet his financial obligations when he was unable to carry on his practice.

On each occasion Dr. "A" has been completely satisfied with the manner in which his applications for benefits have been handled and said so in a recent letter to Mutual of Omaha.

To put it in his own words: "I feel that my best friend in time of need has been Mutual of Omaha."

Others Sing the Praises of Their Medical Society Protection Too:

Dr. "B"*
Laurel, Maryland

Since purchasing his Medical Society Income Protection Plan in 1953, Dr. "B" has been disabled five times. He has received benefit checks totaling $1,199.91. Says Dr. "B": "I can truly state that I am very satisfied with my policy with Mutual of Omaha and wish to express my sincere thanks."

Dr. "C"*
Washington, D. C.

When Dr. "C" received his benefit draft for $1,050.00 he commented that he was "most gratified to hear from Mutual of Omaha. Payment of sick benefits was made promptly, and was most appreciated at that time. I have nothing but praise for your organization and appreciate very much the privilege of holding a policy with you."

Dr. "D"*
Glenn Dale, Maryland

After receiving benefits five times for a total of $628.54, Dr. "D" has this to say about his Mutual of Omaha coverage: "I would not hesitate to recommend your company to any of my friends, and can understand why Mutual of Omaha was selected to underwrite the Medical Society's group plan."

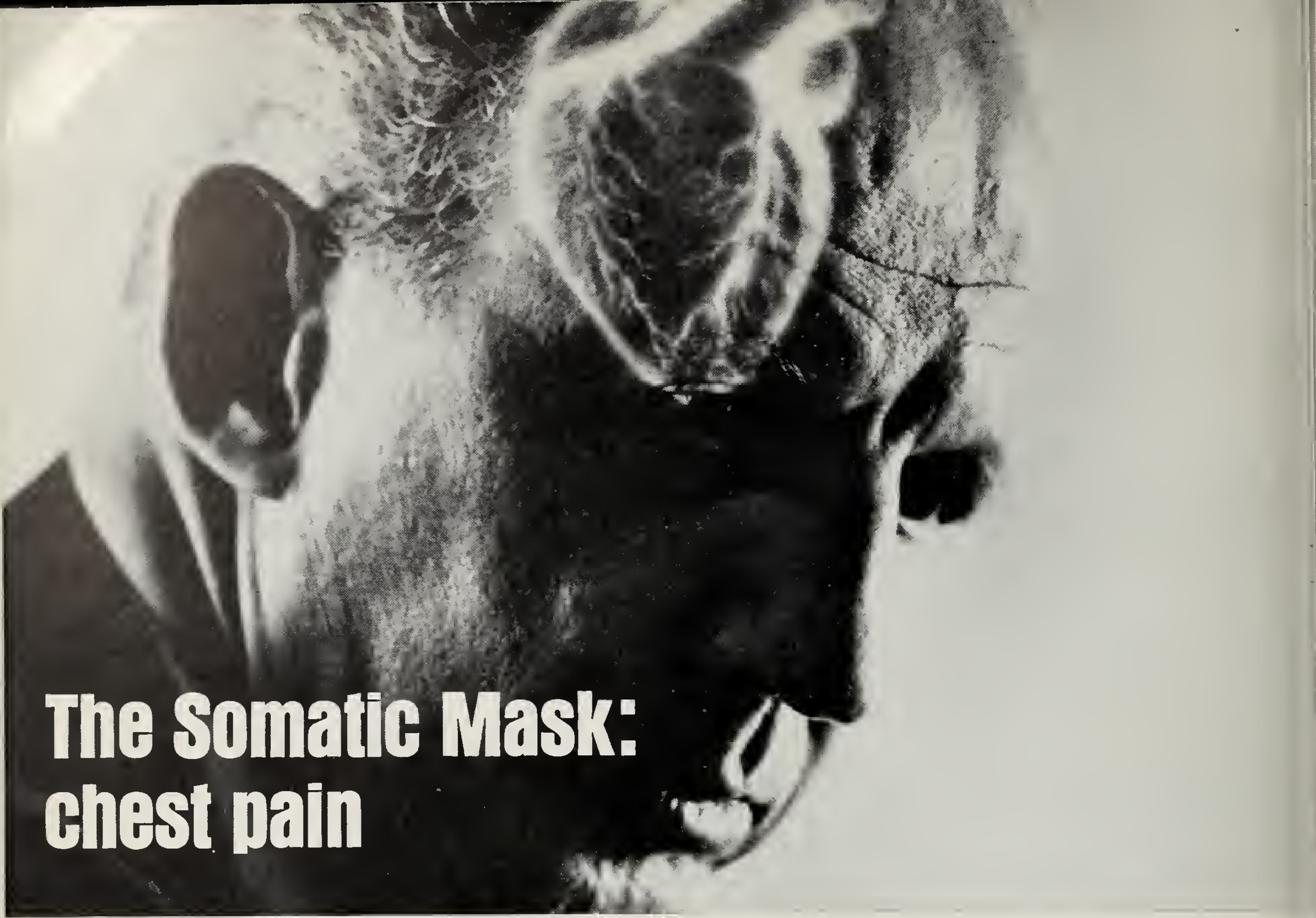
These people know from experience the importance of protecting their most valuable asset—*their ability to earn an income*. How about you? Is your income protected? If not, contact your Medical Society's Insurance Administrator today. He'll be happy to give you full details on the Medical Society's own Income Protection Plan, the same outstanding coverage that has provided so much financial security to these, your fellow members, in time of sickness or accident. It's the only plan specifically designed for Medical Society members by MUTUAL OF OMAHA, the greatest name in health insurance.

Joseph E. Jones, Administrator
1666 Connecticut Avenue, N.W.
Washington, D. C. 20009
Tel. 483-3100

Mutual OF OMAHA
MAXIMUM BENEFITS MINIMUM COST

MUTUAL OF OMAHA INSURANCE COMPANY
Life Insurance Affiliate: United of Omaha
Home Office: Omaha, Nebraska

* Documented in the files of MUTUAL OF OMAHA



heart disease or psychic tension?

“Heart symptoms”—chest pain, tachycardia, arrhythmia—invariably alarm and preoccupy the patient, though they may be completely without organic basis. Such symptoms often are somatic masks of psychic tension, arising from constant encounters with stressful situations.

When the problem is diagnosed as emotionally produced, consider Valium (diazepam) as adjunctive therapy. Valium (diazepam) acts rapidly to calm the patient, to reduce his psychic tension and relieve associated cardiovascular complaints.

Neurotic fatigue—the chronic tiredness resulting from emotional strain which so often accompanies psychogenic “heart” symptoms—also can be controlled by this highly useful agent. Valium (diazepam) often achieves results where other psychotherapeutic agents have failed.

Valium (diazepam) is generally well tolerated, and usually does not impair mental acuity or ability to function. If side effects such as ataxia and drowsiness occur, they usually disappear with dosage adjustment.

Valium® (diazepam)

2-mg, 5-mg, 10-mg tablets

In prescribing: Dosage —Adults: Mild to moderate psychoneurotic reactions, 2 to 5 mg b.i.d. or t.i.d.; severe psychoneurotic reactions, 5 to 10 mg t.i.d. or q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hrs, then 5 mg t.i.d. or q.i.d. as needed; muscle spasm with cerebral palsy or athetosis, 2 to 10 mg t.i.d. or q.i.d. Geriatric patients: 1 or 2 mg/day initially, increase gradually as needed.

Contraindications: Infants, patients with history of convulsive disorders or glaucoma.

Warning: Not of value in the treatment of psychotic patients, and should not be employed in lieu of appropriate treatment.

Precautions: Limit dosage to smallest effective amount in elderly patients (not more than 1 mg, one or two times daily) to preclude ataxia or oversedation. Advise patients against possibly hazardous procedures until correct maintenance dosage is established; driving during therapy not recommended. In general, concurrent use with other psychotropic agents is not recommended. Warn patients of possible combined effects with alcohol. Safe use in pregnancy not established. Observe usual precautions in impaired renal or hepatic function and in patients who may be suicidal; periodic blood counts and liver function tests advisable in long-term use. Cease therapy gradually.

Side Effects: Side effects (usually dose-related) are fatigue, drowsiness and ataxia. Also reported: mild nausea, dizziness, blurred vision, diplopia, headache, incontinence, slurred speech, tremor and skin rash; paradoxical reactions (excitement, depression, stimulation, sleep disturbances and hallucinations) and changes in EEG patterns. Abrupt cessation after prolonged overdosage may produce withdrawal symptoms similar to those seen with barbiturates, meprobamate and chlordiazepoxide HCl.

Supplied: Tablets, 2 mg, 5 mg and 10 mg; bottles of 50 for convenience and economy in prescribing.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

APR 1967
WESBY